TECNO-GAZ S.p.a.

EUROPA B XP AND EUROPA B XP 24L TECHNICAL MANUAL

DXBT004 REV_16

THIS MANUAL MUST BE INTEGRATED WITH THE INFORMATION OF THE USER MANUAL

CE 0434

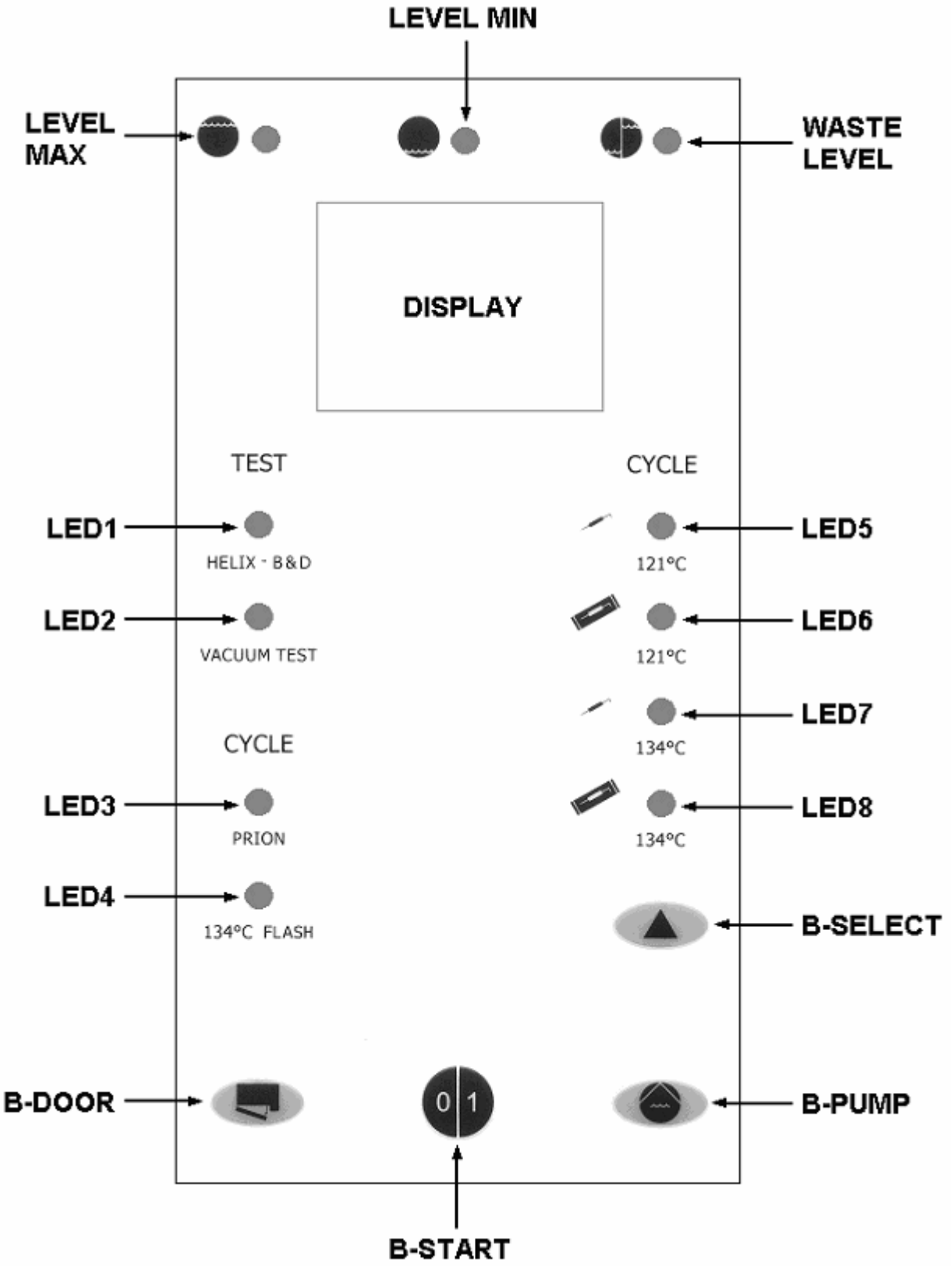
Council Directive 93/42/CEE

COMPANY
WITH QUALITY SYSTEM
CERTIFIED BY DNV
UNI EN ISO 9001
UNI CEI EN ISO 13485

INDEX

- MAIN COMMANDS
- TECHNICAL SETUP
- CONTROL MENU
- CHECK-UP OF LEVEL PROBES
- CHECK AND CLEAN THE VACUUM PUMP
- TEST OF THE PERIPHERALS CONNECTED TO CBL606
- DIAGRAMS
    - PNEUMATIC DIAGRAM
    - ELECTRIC DIAGRAM
- FUNCTIONAL COMPONENTS
- ERROR MESSAGES
- CYCLE DIAGRAMS
- EXPLODED DRAWING

QUADRO COMANDI / MAIN COMMANDS



TECHNICAL SETUP

In this setup you could do the following:

1. change the serial number of the unit
2. change the kind of printer
3. change temperature and pressure offsets
4. change the customer number
5. set the technical transmission

You could enter in this setup with the following procedure:

1. switch-on the unit with the main green button;
2. during the switch-on keep pushed **B-START** and push at least 5 times **B-PUMP** until you see on the display the serial number of the unit;
3. release **B-START** and **B-PUMP**.

To go through the various page of the list above you have to use **B-START**.

1. change the serial number of the unit

B-DOOR selects the number of the serial number that you want to change; the number selected blinks;
B-SELECT increment the number selected;
B-PUMP decrement the number selected.

To SAVE the new serial number keep pushed for at least 10 seconds the 3 button **B-DOOR**, **B-SELECT** and **B-PUMP**.

2. change the kind of printer

with **B-SELECT** or **B-PUMP** you could select the following:

- PRINTER 4050
  Only for the unit with the internal printer.
  4050 is the name of the internal printer.
  This is an old model and on the side of the printer you could find the label HTP-4050.
  The code of this printer is DNVA061.
  The code of the paper for this printer is DNVA063.
  The printer is like the one that you see on figure 1.

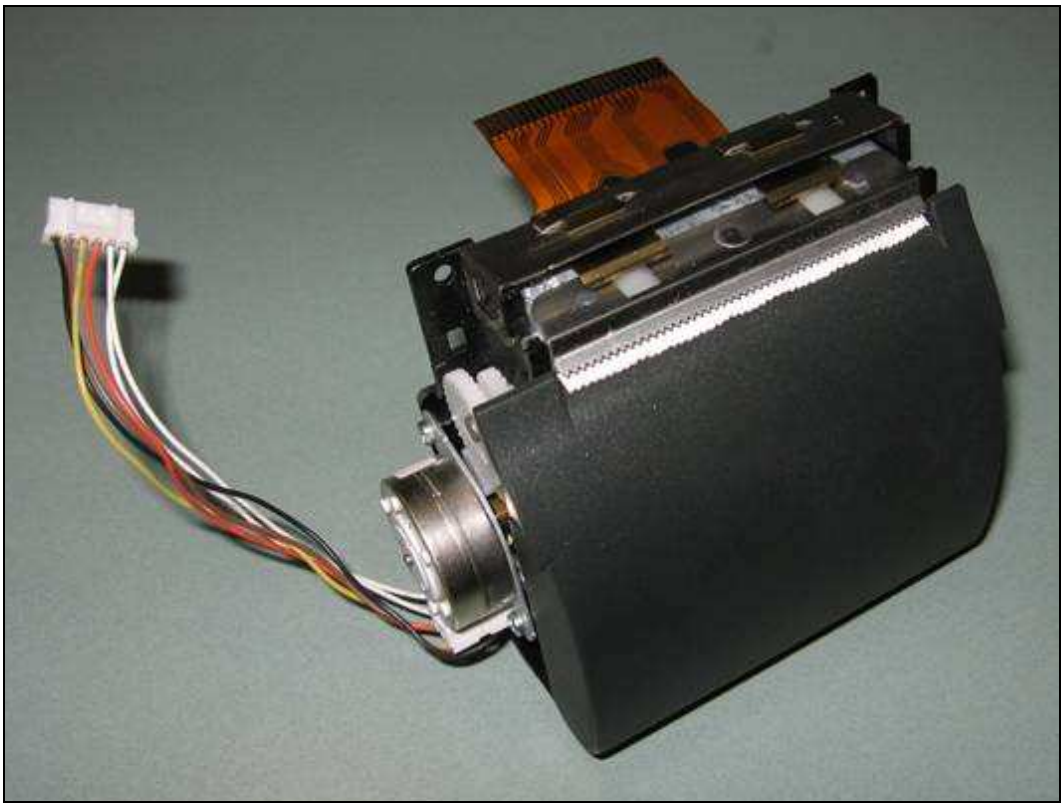


Figure 1

- PRINTER 9050
  Only for the unit with the internal printer.
  9050 is the name of the internal printer.
  This is the new version of the model 4050 and on the printer you could find the label HTPN-9050.
  The code of this printer is DXGA061.
  The code of the paper for this printer is DNVA063.
  The printer is like the one that you see on figure 1.

  This setting is compatible with our new “Custom” printer:
  on this printer you could find the label CUSTOM PLUS-M2B.
  The code of this printer is DXBA361.
  The code of the paper for this printer is DNVA063.
  The printer is like the one that you see on figure 2.

Figure 2

- EXTERNAL PRINTER (STAMP. ESTERNA)
  This setting is used to connect an external printer to the unit.
  The external printer is connected to the serial port of the unit.
  If the serial port is in the front panel then the connector of this port is round, otherwise is rectangular like the COM port on PC computer.
  The external printer must have the following parameters:
  a. BAUD RATE = 600 bps
  b. STOP BITS = 2
  c. PARITY = NONE
  d. BITS PER CHR = 7

  Typically we refer to the following model of external printer:

  MODEL DP1012 (you could find the printer model on the bottom side of the printer)
  In this model you see 4 buttons on the top.
  The first button is an empty square, the second is like a @, the third is an 1 and the fourth is a 0.
  You could enter in the setup by pressing together the button number 1 and the button number 3.
  Here you could advance by pressing the button number 2 and you could change the selected option by pressing the button number 1.
  Then you have to press together the buttons number 1 and the button number 2 to save and exit from setup.

  MODEL DP24S4N (you could find the printer model on the bottom side of the printer)
  In this model you have 2 buttons on the top (named PRINT and FEED) and 1 switch on the back.
  To enter in the setup push together the 2 buttons on the top and then switch on the printer by the switch on the back.
  Now use the PRINT button to change the selected option and the FEED button to select the next option.
  Exit from setup by switching off the printer with the switch on the back.

- NO PRINTER (STAMP. ASSENTE)
  Use this setting if you don't have any of the above or if you want to record cycle data only with a PC.

This setting is automatically saved.

3. change temperature and pressure offset

To modify/save the offset of the pressure/temperature sensor (buttons that you need to use) please refer to the chapter “CONTROL MENU”.

4. change customer number

This page is used to change a global setting of the unit and it is only for manufacturer setup.
Please don’t change this number if you don’t know his function.
With the software release 2.56 or newer:
if you have an Europa B xp with standard European cycles then ensure that this number is 10;
if you have an Europa B xp 24 with standard European cycles then ensure that this number is 11;
otherwise ask to the manufacturer.
This setting is automatically saved.

5. set the technical transmission

On the LCD you see Tx TECNICO on the first line;
in the second line, with **B-SELECT** and **B-PUMP**, you could select the following:

- PRESENTE
  The electronic board will send on the serial port of the unit status information and values of T1, T2 and P1 every second when the unit is in the standard user mode.
  You need a special software to acquire this information.

- ASSENTE
  The electronic board will send on the serial port the information that are normally printed during a cycle in a codified format.
  You need a special software to acquire this information.

CONTROL MENU

Attention: in this device it is not recommended to do the temperature probes calibration if the device is younger than 1 years old.

This device has 2 temperature probes into the chamber (**TEMP1** and **TEMP2**) and 1 pressure transducer (**PRESSURE1**).

For the temperature probes calibration in this autoclave it is not necessary to work on the electronic board.

NOTE: it is not possible to adjust the probe offset when the display shows “OPEN DOOR”.
Instead it is possible to do that in every phase of sterilization cycle.

For temperature probes offset regulation it is necessary go into the control menu:

1. Push and hold **B-DOOR**
2. Push and release at least 5 time **B-SELECT** until the information showed on display change (you can see for example the picture above)
3. Release **B-DOOR**

If in the second line from the bottom the display shows **T1** then you are in the control menu (you can see for example the picture above)

At this point with **B-SELECT** and **B-PUMP** is possible to increase and decrease the **T1** offset; the offset value is showed on the last line of display.
T1 is the temperature probe called **TEMP1** in the list of functional components.

It is possible to save the value set by keeping pushed **B-DOOR** and **B-PUMP** at the same time until you listen the acoustic signal.

It is possible to switch between **T2** and **P1** with **B-DOOR**.
T2 is the second temperature probe and it is called **TEMP2** in the list of the functional components.
P1 is the pressure transducer and it is called **PRESSURE1** in the list of the functional components.

If you want to exit from the menu you have to push and hold pushed **B-DOOR**.

CHECK-UP OF LEVEL PROBES

The level probes are two, one on the clean water tank (TANK1) that we will call **LEVEL1** and the other one in the used water tank (TANK2) that we will call **LEVEL2**:

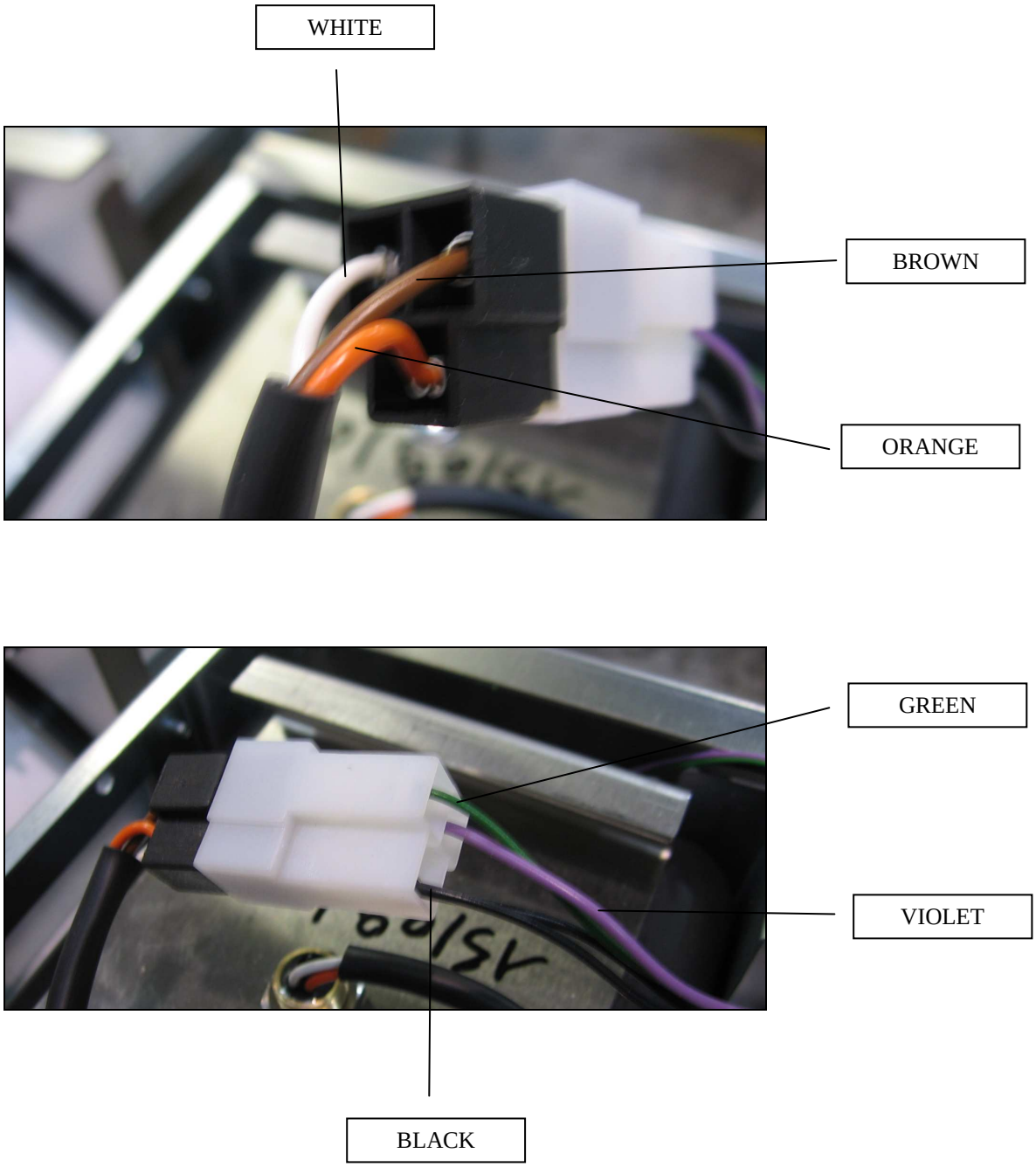
LEVEL1 – this shows the “minimum” and the “maximum” level of the clean water tank
LEVEL2 – this shows the maximum filling of the used water tank

To check if the probes work correctly it’s necessary to remove the cover of the tank and, with the autoclave turned on, you have to flaw the craft on the auction: then, looking at the front panel you have to verify, that the signal of the level is showed. Clean the crafts before reassembling the cover of the tank.

Acting on the craft of LEVEL1 they will be had to turn on the LED indicative following: **LEVEL MIN** and **LEVEL MAX**, respectively when the craft is found down at the auction on the probe of level and the summit.

Acting on the craft of the **LEVEL2** will be had to turn on the LED indicator **WASTE LEVEL** when the craft is found to the summit of the auction probe.

For color wires connection of **LEVEL1** please look at the picture in the next page.


WHITE
BROWN
ORANGE
GREEN
VIOLET
BLACK

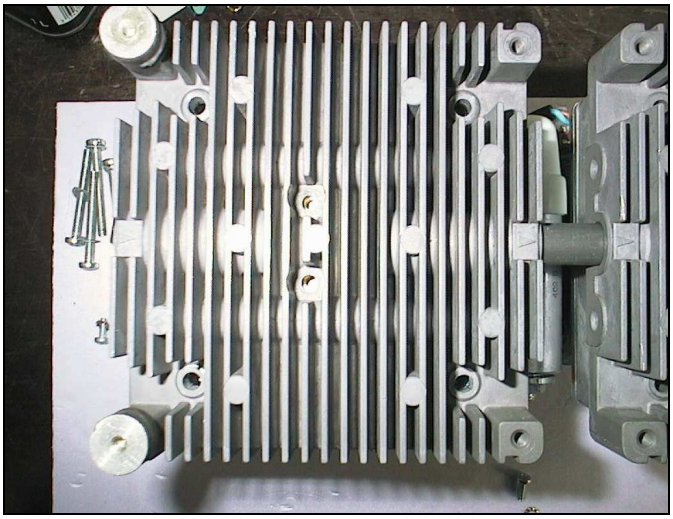
CHECK AND CLEAN THE VACUUM PUMP CPGM020

The failure vacuum to reach the fixed values compromise the sterilisation cycle. Its important the periodically check of the vacuum pump, to guarantee the correct operation of the autoclave. Don't make maintenance on vacuum pump under warranty (1 year). To do maintenance proceed as follow:

1. Unscrew the fixing screw and take out the pump

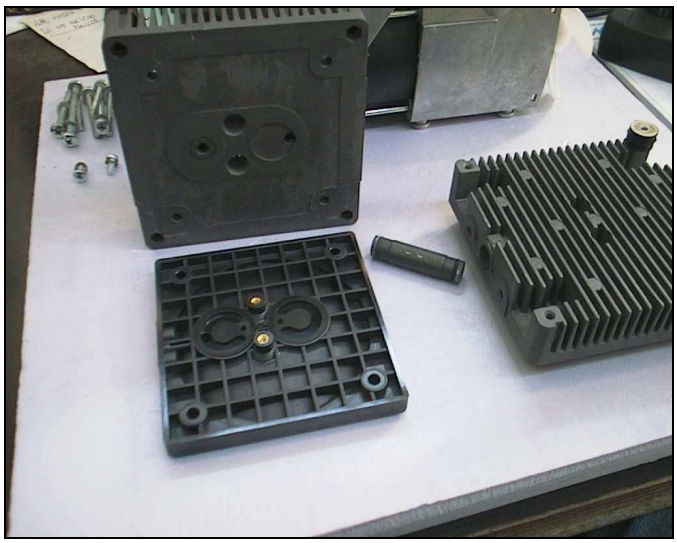
2. Place the vacuum pump on a good and clean work table

3. Proceed to open the pump unscrewing the four screw of both head (eight screw at all)

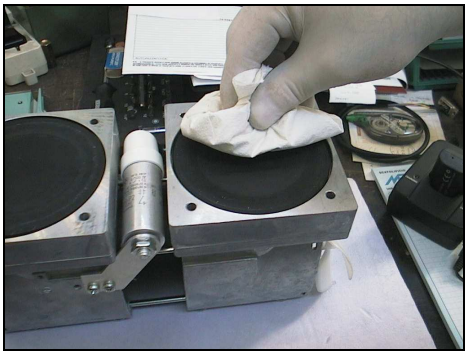


4. Lift at the same time the two heads of the pump and separate them: the heads are jointed by a collector inserted by pressure

5. Open the two heads by unscrewing the two internal screw (four screw at all)
   It's important don't invert the two heads when reassembling them



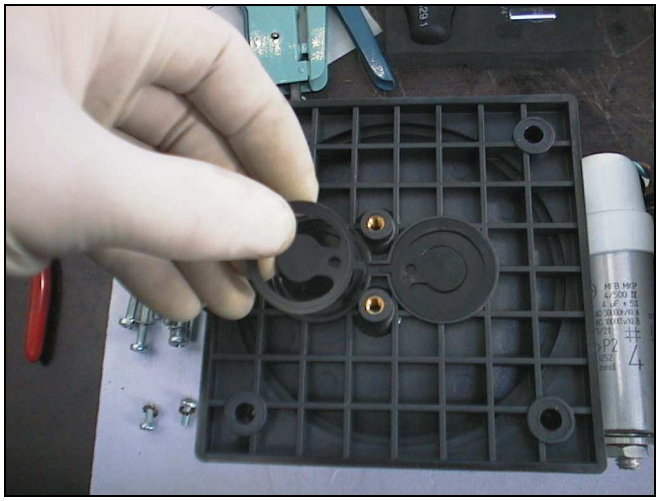
6. The cleaning of the diaghpram must be done with non-chemical agent products (eg. Alchool)
   Verify the diaghpram condition by view
   It's better to replace the seal and the two o'rings



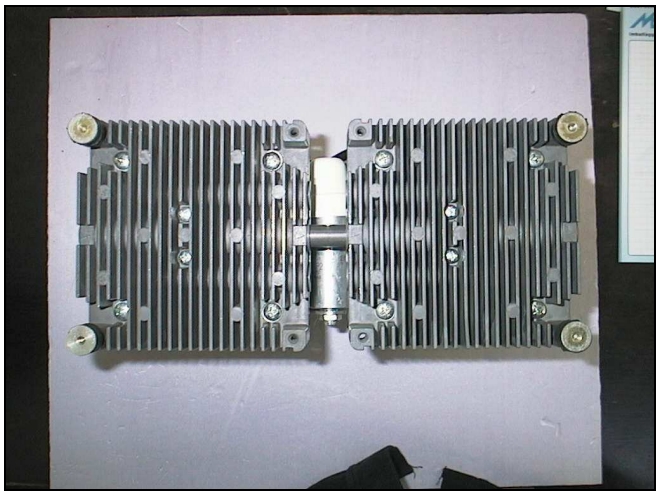
7. Clean the metal head and the intermediate plate with the same procedure as the diaghpram
   Remove completely the impurities to avoid any malfunction

8. Place the intermediate plate on the pump (everyone on the original position and direction)

9. Insert the seals into the appropriate seat (the seals are all of the same type)



10. Joint the metal heads with the appropriate collector and slowly place on the pump



11. Tighten the two central screws without forced it

12. Tighten the four external screws by forced it

13. Closed at the end the heads by tighten the two central screw, blocked it but not forced, to avoid to damage the intermediate plates: a high force can broken them (see detail photo)

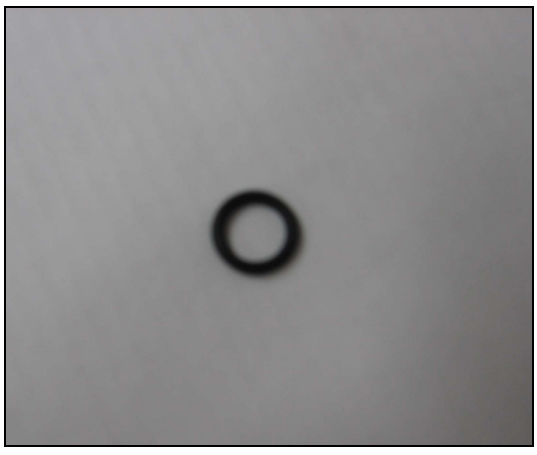
14. Verify the operating of the pump, by connect it to a pressure transducer (or a manometer) and feeding for five seconds (no more).
    The pump must reach a vacuum degree of -0.96 / -0.98 bar: a correct holding means the right operation of the pump
    In a first time there is lack of pressure of 0.02 / 0.04 bar, afterwards the pressure is aligned with the holding parameter. In case of a little but constantly lack of pressure, it's necessary to repeat the cleaning and a new control procedure

15. Final assembling of the pump on the autoclave

Spare parts for vacuum pump:

CPGM027 - CPGM028

CPGM023



CPGM043

CPGM025

CPGM024

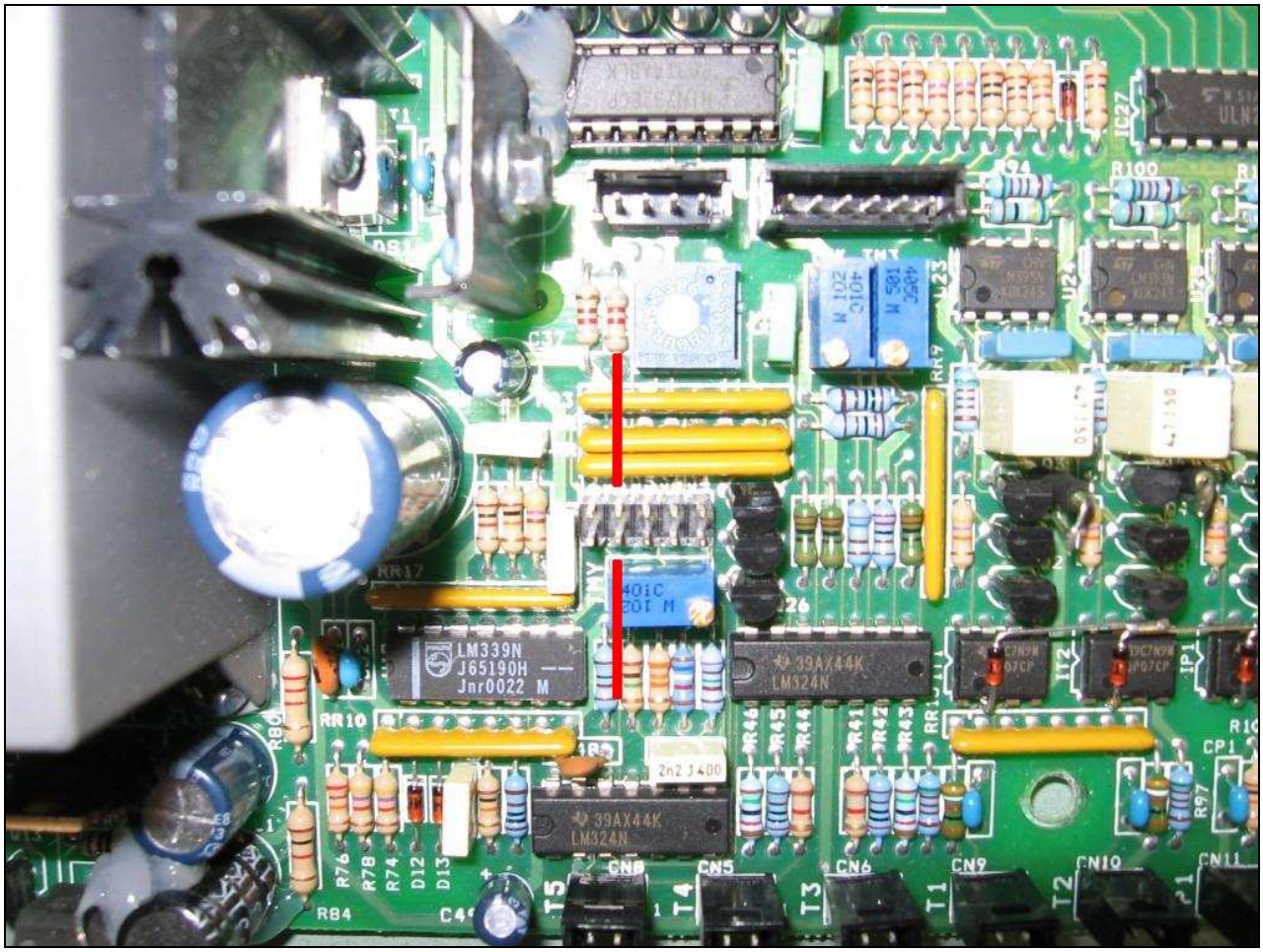
TEST OF THE PERIPHERALS CONNECTED TO CBL606

With the **CBL606** it's possible to power up one by one all the peripherals connected to this board without following the sterilization cycle.

Attention: during the test, for example, if you power up the heating element then this will be always on until you don't stop it.
We suggest you to execute the test only with the door opened to avoid that the unit can go in pressure.

In order to execute the test proceed as follows.

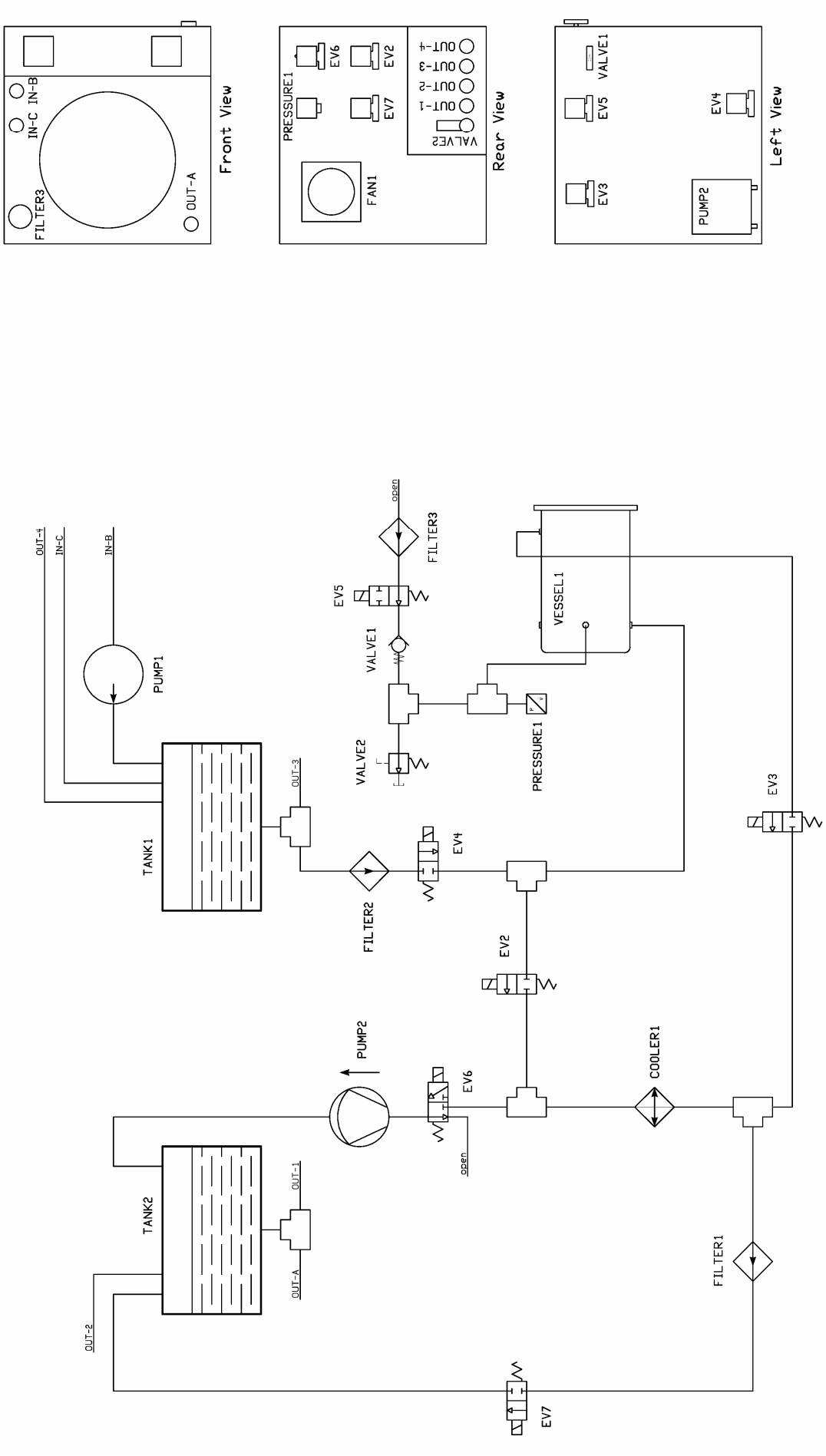
Insert on the board **CBL606** a JUMPER in J3 position.
The J3 position in the figure below is between the 2 red lines.

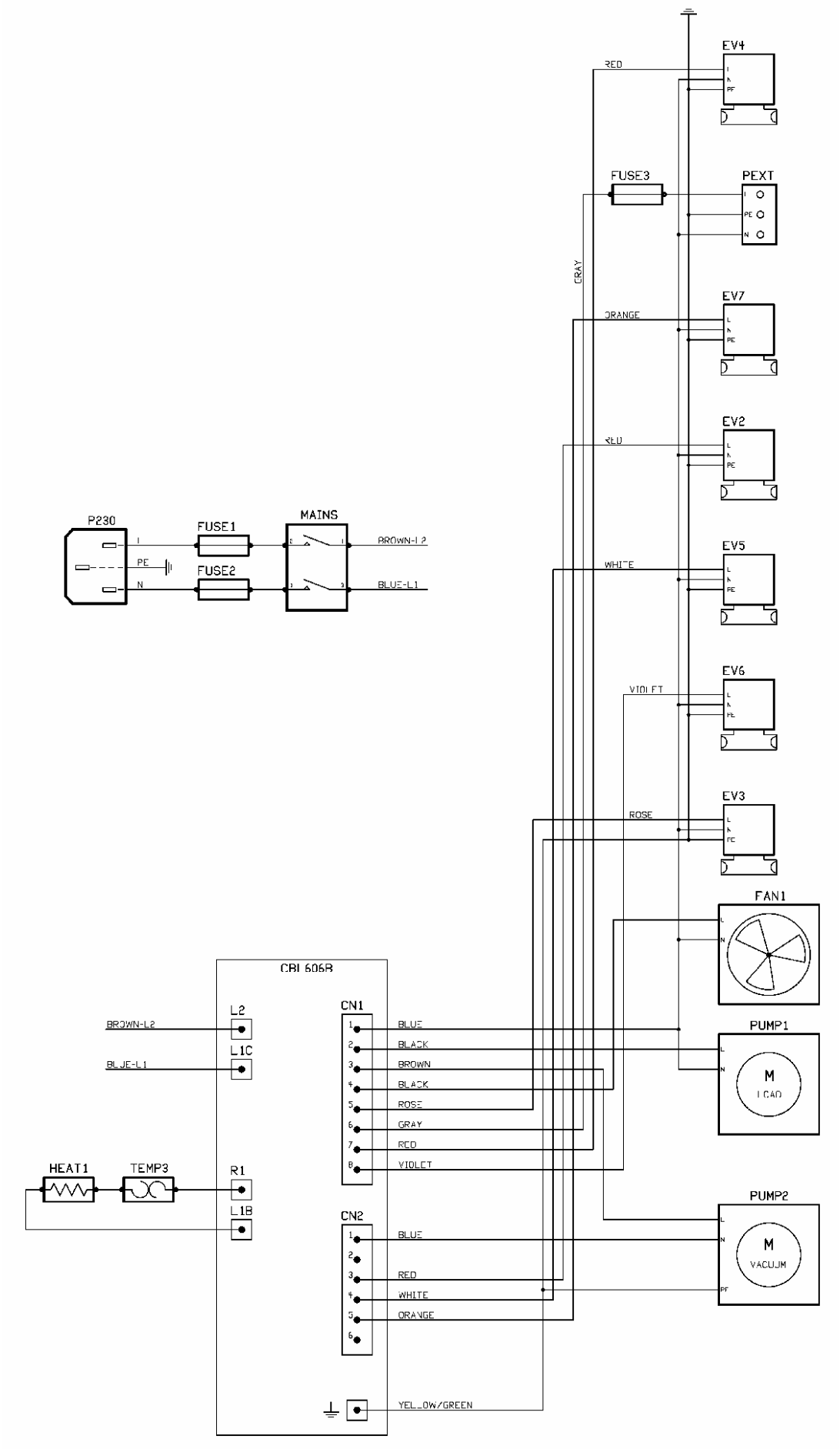


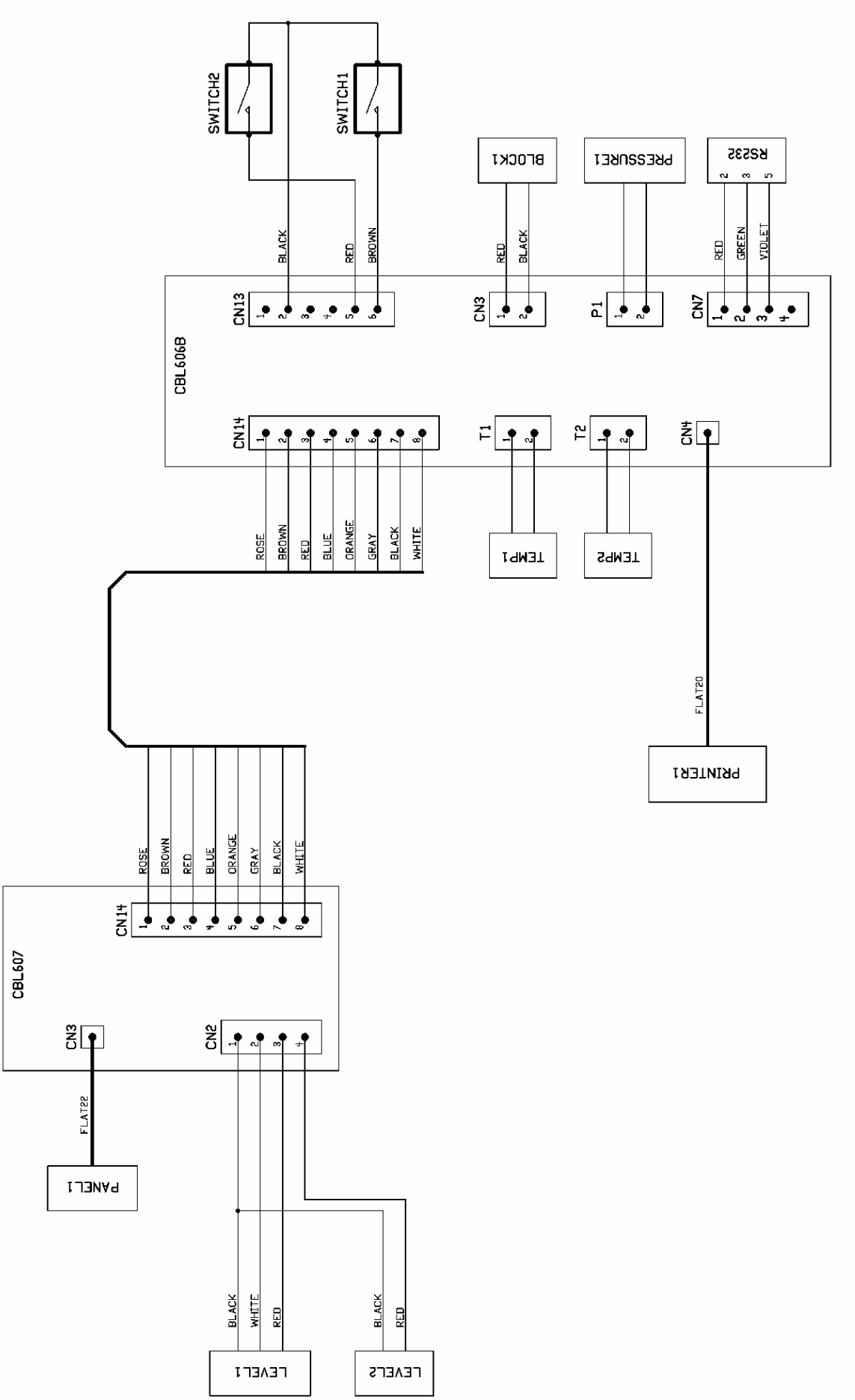
Switch on the autoclave with main green button.
And use the **B-START** until you read on the display the string USCITA.
Then use **B-PUMP** in order to increase the number indicated on the display.
To each number corresponds the activation of one peripheral connected to the board;
You could find the number-peripheral correspondence in the list that follows:

1. HEAT1
2. *not connected*
3. EV7
4. EV5
5. EV2
6. it closes relay "the direction" of BLOCK1 on CBL606
7. BLOCK1
8. *not connected*
9. it opens relay "the direction" of BLOCK1 on CBL606
10. BLOCK1
11. EV4
12. PUMP1
13. PUMP2
14. FAN1
15. EV3
16. *not connected*
17. EV6
18. *not connected*
19. BUZZER on CBL606
20. *not connected*

SCHEMI / DIAGRAMS


Front View
IN-C
IN-B
FILTER3
OUT-A
Rear View
PRESSURE1
EV6
EV2
EV7
FAN1
OUT-4
OUT-3
OUT-2
OUT-1
VALVE2
Left View
VALVE1
EV5
EV4
EV3
PUMP2
OUT-4
IN-C
IN-B
PUMP1
TANK1
OUT-3
open
FILTER3
EV5
VALVE1
VALVE2
PRESSURE1
VESSEL1
EV3
FILTER2
EV4
EV2
PUMP2
EV6
COOLER1
open
TANK2
OUT-1
OUT-A
OUT-2
FILTER1
EV7


P230
FUSE1
FUSE2
MAINS
PE
N
BROWN-L2
BLUE-L1
EV4
FUSE3
PEXT
EV7
EV2
EV5
EV6
EV3
FAN1
PUMP1
PUMP2
M
LOAD
VACUUM
RED
GRAY
ORANGE
WHITE
VIOLET
ROSE
CBI 606B
L2
L1C
R1
L1B
CN1
CN2
BLUE
BLACK
BROWN
YELLOW/GREEN
HEAT1
TEMP3


SWITCH2
SWITCH1
BLOCK1
PRESSURE1
RS232
BLACK
RED
BROWN
RED
BLACK
RED
GREEN
VIOLET
CN13
CN3
P1
CN7
CBL606B
CN14
T1
T2
CN4
ROSE
BROWN
RED
BLUE
ORANGE
GRAY
BLACK
WHITE
TEMP1
TEMP2
FLAT20
PRINTER1
ROSE
BROWN
RED
BLUE
ORANGE
GRAY
BLACK
WHITE
CN14
CBL607
CN3
CN2
FLAT22
PANEL1
BLACK
WHITE
RED
BLACK
RED
LEVEL1
LEVEL2

FUNCTIONAL COMPONENTS

Exploded drawing	Name	Description
53	CBL606B	Power board (main electronic board)
8	CBL607	Display board (electronic board to control the display, the main commands and to read water levels)
83C	EV2	Solenoid valve typically **close** (for connections 1/4 gas)
83A	EV3	Solenoid valve typically **close** (for connections 1/4 gas)
81	EV4	Solenoid valve typically **close** (for connections 1/8 gas)
82	EV5	Solenoid valve typically **open** (for connections 1/4 gas)
84	EV6	**3 way** solenoid valve (for connections 1/4 gas)
83B	EV7	Solenoid valve typically **closed** (for connections 1/4 gas)
	FILTER1	Brass filter
	FILTER2	Plastic filter
37	FILTER3	Bacteriological filter
89	PRESSURE1	Pressure sensor
87	VALVE1	Non return valve
76	VALVE2	Safety valve
5	MAINS	Mains switch (green)
72	P230	Mains input 230 Vac
71A	FUSE1	Fuse 12 A
71B	FUSE2	Fuse 12 A
73	PEXT	Mains auxiliary output (for deionizer connection)
54	FUSE3	Fuse 500 mA
58A	TANK1	Clean water tank
58B	TANK2	Waste water tank
62A	LEVEL1	Level probe for the clean water tank
62B	LEVEL2	Level probe for the waste water tank
66	COOLER1	Cooler
67	FAN1	Fan
64	PUMP1	Load pump
57	PUMP2	Vacuum pump
40	VESSEL1	Vessel
27	BLOCK1	Door electromagnet (used to advance the pin to block the handle)
39	SWITCH1	Door open/close switch (push button that is pushed when the user close the door)
29	SWITCH2	Door electromagnet switch (switch activated when the electromagnet pin advance into the handle)
43	HEAT1	Chamber heat
41A	TEMP1	Temperature probe 1
41B	TEMP2	Temperature probe 2
42	TEMP3	Resetting manual thermostat – heater element
75D	OUT-1	Posterior tap to remove water from **TANK2**
75C	OUT-2	Posterior vent output for **TANK2**
75A	OUT-3	Posterior tap to remove water from **TANK1**
75B	OUT-4	Posterior vent output for **TANK1**
34A	OUT-A	Frontal output to remove water from **TANK2**
34B	IN-B	Frontal input to charge clean water with **PUMP1** on **TANK1**
34C	IN-C	Frontal input to manual charge clean water on **TANK1**
74	RS232	RS232 port (to connect the computer)
4	PANEL1	Front panel (see main commands)
6	PRINTER1	Printer

ERROR MESSAGES

E200
The cycle has been started with the LEVEL MIN LED on.
You could have this error at the beginning of the cycle.

1. add water into **TANK1**
2. check **LEVEL1**
3. check the electrical connections between **LEVEL1** and **CBL607**
4. check or replace **CBL607**

E250
The cycle has been started with the LEVEL MAX LED off and
the autoclave is set with water charge by demineralizer.
You could have this error at the beginning of the cycle.

1. refill **TANK1**
   - check the tap in the back of the autoclave
     (if the water clean system is connected then the tap must be open)
   - check if the water is going into the water clean system
   - check the installation of the water clean system
2. check if there is 230V on **PEXT** when the LED **LEVEL_MAX** is off (if there is no voltage then the problem could be the board **CBL606**, **FUSE3** or the connection between the 3 object above)
3. check **LEVEL1**
4. check the electrical connections between **LEVEL1** and **CBL607**
5. check or replace the board **CBL607**

E300
The cycle has been started with the WASTE LEVEL LED on.
You could have this error at the beginning of the cycle.

1. remove water from **TANK2**
2. check **LEVEL2**
3. check the electrical connections between **LEVEL2** and **CBL607**

E401
The cycle has been started with the door open.
You could have this error at the beginning of the cycle.

Close the door and restart the cycle.
If the door isn't open then **SWITCH1** doesn't feel the handle of the door.

1. check **SWITCH1**
2. check the electrical connections between **SWITCH1** and **CBL606**:
   the problem could be a false contact on the cable connector for the electronic board
3. check the status of the cables
4. check the position of **SWITCH1**:
   you could have problem if the switch is too much within the metallic support panel

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E451
The cycle has been started with the door closed but the door is not blocked.
You could have this error at the beginning of the cycle.

1. check **BLOCK1**:
   refer to chapter *"test of the peripherals connected to CBL606"*

2. check the electrical connections between **BLOCK1** and **CBL606**

3. check **SWITCH2**:
   it's possible that **SWITCH2** hasn't told to **CBL606** that
   the pin of the electromagnet **BLOCK1** has blocked the handle

4. check the electrical connections between **SWITCH2** and **CBL606**:
   the problem could be a false contact on the cable connector for the electronic board

5. it's possible that the pin of the electromagnet **BLOCK1** couldn't go into the handle
   due to a non correct alignment between the handle hole and the **BLOCK1** pin:
   - regulate the door as showed in the user manual:
     if the door is hard to close then the handle heel keep in distance from the metallic panel
   - check the position of the electromagnet **BLOCK1** on its support
   - check the position of the door arm

6. check the position of **SWITCH2**:
   it's possible that the crank of **SWITCH2** hasn't heard the movement of **BLOCK1** pin
   due to a non correct alignment between the pin and the crank

---

E461
The vacuum test has been started with the temperature in the chamber greater than 40°C.
You could have this error at the beginning of the cycle.

Wait that temperature in the chamber fall under 40°C.

A001
The user has stopped the cycle (by pushing the button **B-START**).

If this alarm comes out every time you start a cycle
(after about 10 seconds from the beginning of the cycle)
then it's possible that you have a problem on the front panel buttons.

A011
CBL606 doesn't communicate with **CBL607**.

Check the connections between the 2 electronic boards:
the problem could be the cable that connects the 2 board;
in other case we have observed that the problem is the electronic display board **CBL607**.

A101
The unit hasn't reached the prefixed vacuum.
*You could have this alarm during **T0**, **T2**, **T4** or **T10**.*

1. clean or replace the gasket of the door
2. clean the external border of the chamber
3. adjust the door as explained in the user manual: the handle may close too soft
4. if you find a lot of water in the chamber after the alarm then the problem could be on **EV4**
5. check **EV6** that must open and close alternatively while **PUMP2** is working
6. check **EV2** and **EV7**
7. check if **EV5** is closed:
   you could put a finger on **FILTER3** and look if it sucks air
   (you could feel the air flow only if the leakage is not very small)
8. check if **COOLER1** has a small hole
9. check the pipes, the connections and the links near the chamber
10. check if the stoppers/nuts over the chamber are well closed
11. check the silicon gaskets on **TEMP1** / **TEMP2**
12. clean **PUMP2**

Typically each vacuum phase is about 4 or 5 minutes.
If this phase takes more times then you could have one of the problem above.

A111 / **A121**
Loose of pressure during the vacuum test.
*You could have the alarm A111 during **T11** and the alarm A121 during **T12**.*

1. clean or replace the gasket of the door
2. clean the external border of the chamber
3. adjust the door as explained in the user manual: the handle may close too soft
4. if you find a lot of water in the chamber after the alarm then the problem could be on **EV4**
5. check **EV2** and **EV3**
6. check if **EV5** is closed:
   you could put a finger on **FILTER3** and look if it sucks air
   (you could feel the air flow only if the leakage is not very small)
7. check the pipes, the connections and the links near the chamber
8. check if the stoppers/nuts over the chamber are well closed
9. check the silicon gaskets on **TEMP1** / **TEMP2**

It could be useful to find small hole or broken connection that make fail the vacuum phase with some special products like the one that you see in the picture below:

During the cycle you can put a lot of this product on a suspect link or part: if you have a small hole you will see that the foam will be sucked (during the vacuum phase) or sprayed (if the chamber is in pressure).

A401
SWITCH1 has indicated to the electronic board that the door has been opened during the cycle or
SWITCH2 has indicated that the pin of the electromagnet has been removed from the handle.
You could have this alarm during the whole cycle.

1. check **SWITCH1** and **SWITCH2**
2. check the electrical connections between **SWITCH1**, **SWITCH2** and **CBL606**:
   the problem could be a false contact on the cable connector for the electronic board
3. check the status of the cables
4. check the alignment of **SWITCH2** on the electromagnet **BLOCK1**:
   the switch could be in a critical position
5. check the position of **SWITCH1**:
   you could have problem if the switch is too much within the metallic support panel

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A501
Loose of pressure during the sterilization phase.
*You could have this alarm during **T6**.*

If you have leakage during the sterilization then the pressure decrease and
if the pressure goes under about 1.8 Bar during a 134 cycle or under 0.8 Bar during a 121 cycle then you have this alarm.
Note that all the solenoid valve are closed during the sterilization so
if a solenoid valve doesn't close well then you could have a loose of pressure.
Also check the gasket of the door,
the links and the connections on the chamber and
the gasket of the temperature probes.
Check also the quantity of water that goes into the chamber (as explained in the alarm A651).

This alarm message could be related to A651, A661 and A751.

A551 / **A552**
There is a problem with **TEMP1** / **TEMP2**.
The problem could be one of the temperature probe or the electronic board.
TEMP1 is connected in the position marked with *"T1"* on the board **CBL606** and
TEMP2 is connected in the position marked with *"T2"*.

Change the position of the 2 probe connectors on the board **CBL606**,
reset the alarm and look if it change: from A551 to A552 or from A552 to A551.
If the alarm doesn't change then the problem is the board **CBL606**.
Otherwise the problem is the temperature probe.
Check also the status of the probe connectors / cables.

A641
High pressure in the chamber.
*You could have this alarm during **T5** or **T6**.*

If the pressure in the chamber, during the preheating phase or the sterilization phase, is over about 2.4Bar then the unit will show this alarm.

This problem could be related to the status of **EV3** and **EV6** or
to a problem on the electronic board **CBL606**.

1. check the electrical connections between **EV3**, **EV6** and **CBL606**
2. clean or replace **EV3** and **EV6**
3. replace the electronic board **CBL606**
4. check the status of **PRESSURE1**

A651
The temperature in the chamber is over the maximum value for the selected cycle.
*You could have this alarm during **T1**, **T3**, **T5** or **T6**.*

The unit shows this alarm code
during the sterilization phase when the temperature read by **TEMP1** or **TEMP2**
goes over **125°C** for the cycle 121 or goes over **138°C** for the cycle 134 or
during the preheating phases when the temperature
goes over **110°C** and the pressure is less than 0.3 Bar.

Step 1
If the pressure rises quickly after the vacuum phase then
check the status of the solenoid valves connected to the chamber: **EV2** and **EV3**.
During the preheating phase **EV7** is open to discharge the water in the **COOLER1**,
so if you have a problem on **EV2** or **EV3** that remains open for some reasons
then water or steam will escape from the chamber and you'll have the overheating alarm.
In this case the problem could be a solenoid valve, the electronic board or a cable.

Step 2
If you have this alarm during the sterilization phase then run a cycle and look the values of **TEMP1** and **TEMP2** in the control menu: they must be quite closed near the sterilization phase and during this phase; if they aren't then try to adjust the offset of **TEMP1** or the offset of **TEMP2** as explained in the example below:

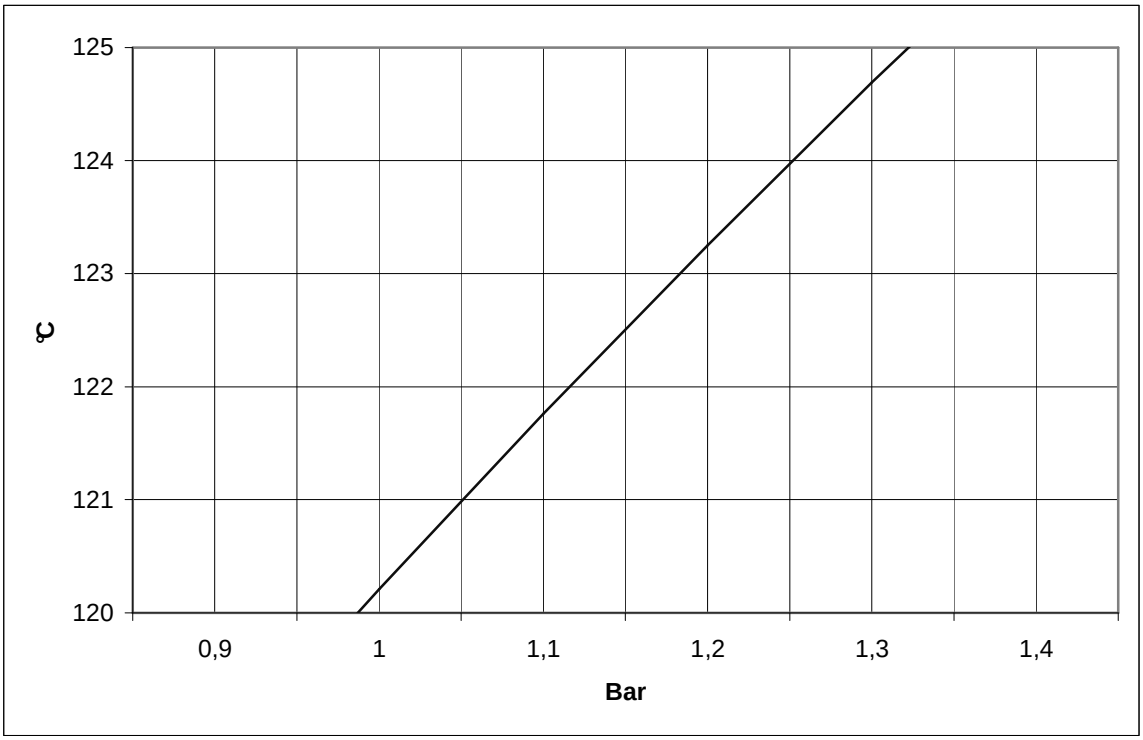
Example 1
If you run a cycle 134 and you find in the control menu the following value:
T1 = 134.2°C, T2 = 135.0°C and P1 = 2.1 Bar
then increase the offset of **TEMP1** of about 0.8°C

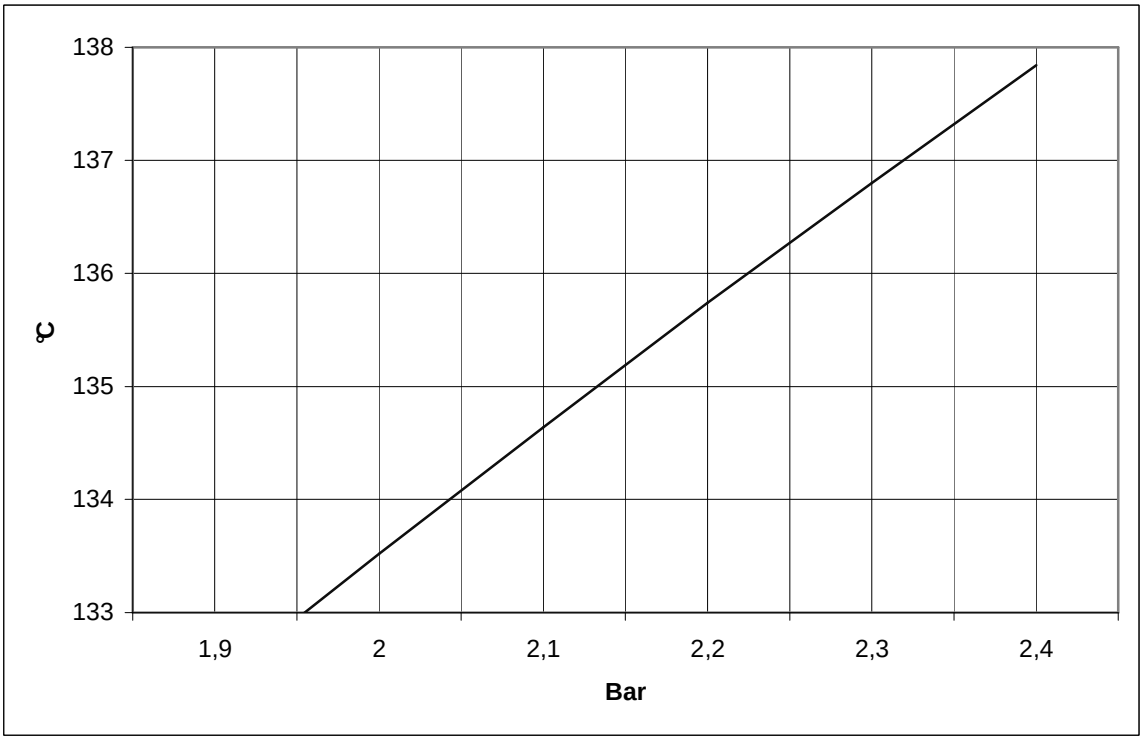
Example 2
If you run a cycle 134 and you find in the control menu the following value:
T1 = 135.0°C, T2 = 134.1°C and P1 = 2.1 Bar
then increase the offset of **TEMP2** of about 0.9°C

Example 3
If you run a cycle 134 and you find in the control menu the following value:
T1 = 135.0°C, T2 = 134.1°C and P1 = 2.0 Bar
then decrease the offset of **TEMP1** of about 0.9°C

Note: typically the value of **PRESSURE1** is correct and doesn't need any adjustment.

To understand the example above you have to refer to the following temperature-pressure diagrams:





Step 3
The cause could be also that the right quantity of water after the vacuum phase isn't came into the chamber; for example by a closed pipe from **TANK1** to the chamber trough **EV4**.

1. replace **TANK1** with a graduated tank and
   measure the quantity of water that goes into the chamber;

   if the chamber is 24 liters then you have to measure:
   about 0.35 liters after the first 2 vacuum phases and
   about 0.60 liters after the last vacuum phase;

   otherwise you have to measure:
   about 0.20 liters after the first 2 vacuum phases and
   about 0.45 liters after the last vacuum phase

2. if the quantities above are correct then
   - check the hole in **TANK1** that could be closed by some impurities
   - check the pipe from **TANK1** to **FILTER2** that could be closed
   - remove the water in **TANK1** by **OUT-3** until turn-on the LED of the minimum clean water level; remove all the remaining water in **TANK1** by **OUT-3** and put it in a graduated can; if the water is less than 0.8 liters then you have to replace **TANK1**

3. if they aren't correct then
   - check and clean **EV4**
   - check **FILTER2**
   - check the filter in the chamber
   - check the connection and the link from **EV4** to the chamber
   - ask to the manufacturer if you need an upgraded microcontroller

Step 4
This alarm could be also caused by a small loose of steam during the cycle:
- try to adjust the door as indicated in the user manual
  (if the door closes too softly then steam could came out)
- check and clean the solenoid valve connected to the chamber: **EV2**, **EV3** and **EV4**
- check the connections and the links near the chamber
  (they could have a small hole, check it with a small mirror)
- check the gasket of **TEMP1** and **TEMP2**
  (during the cycle put a small mirror in the back of the chamber near TEMP1 and TEMP2)

Step 5
This alarm could be also caused by a problem on temperature reading:

- replace the electronic board **CBL606**
- replace **TEMP1** and **TEMP2**

If you replace the temperature probes make attention to the silicon gasket – Figure 1.
Every time you remove a temperature probe,
remove also the old silicon gasket in the chamber and replace it.
When you mount the new probe don't close too much the screw in Figure 1
because you could damage the silicon gasket:
put 2 fingers on the probe (from the internal side of the chamber) and
try to push and pull the probe, if it's fixed then you have closed enough the screw.

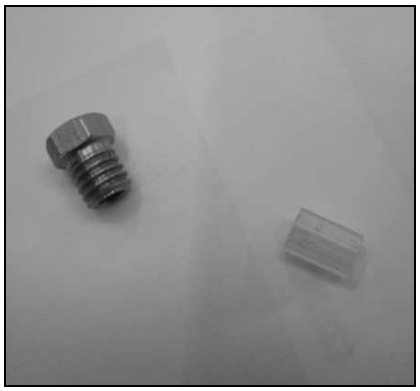


Figure 1

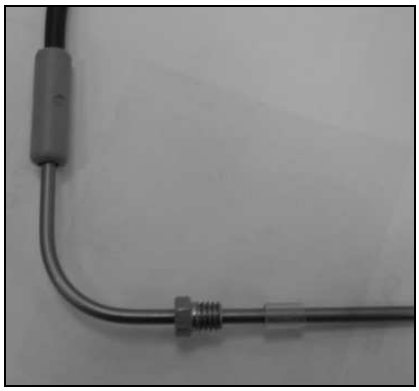


Figure 2

Figure 3

On the Figure 4 you see the silicon gasket that comes out from the hole:
this is ok and it's another signal that the probe has been well fixed.

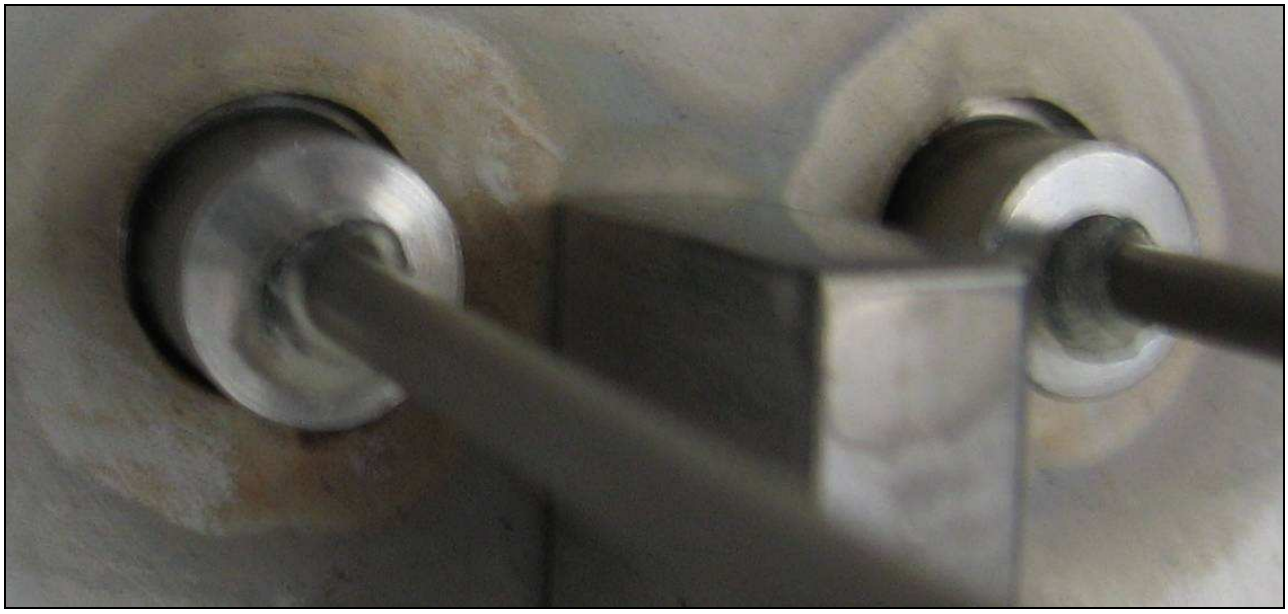


Figure 4

Step 6
This alarm could be also caused by an arrangement phenomenon of the heating element over the chamber that will generate a non correct conduction of the heat:

- cut the top of the insulation band in 4 points
  (near the screws that fix the heating band) and screw them more

- check the position of the heating band:
  if it is over the weddings of the chamber top link then
  unscrew the fixing screws and move the heating band outside
- replace the heating band

A661
The temperature probes show different values during the sterilization phase:
the difference between **TEMP1** and **TEMP2** is more than 2°C.
*You could have this alarm during **T6**.*

This case is like A651 (follow the step 2, 3, 4, 5 and 6)

A701
The pressure in the chamber doesn't rise correctly.
*You could have this alarm during **T1**, **T3**, **T5**.*

1. check the thermo switch of the heating band:
   this element could have opened by an over temperature problem
2. check if you have 230V on the contacts for the heating band in the **CBL606**
   during the preheating phase: if not then replace the **CBL606**
3. the heating band could be broken: replace it

ATTENTION
The A701 is shown when the unit take too much time to make the preheating phase, for example because the heating band isn't working.
If the heating band isn't working then could be damaged the electronic board so the *switch* on the board doesn't close (in this case you have to replace the CBL606).
Also if the heating band isn't working then it's possible that in a previous cycle the unit is gone in over temperature and the thermoswitch has opened.
The unit could be gone in over temperature for some different case:
- no water in the chamber after the vacuum phase;
- water is escaped during the preheating (for example an EV doesn't close)
- the *switch* on the electronic board that control the heating band is broken and the heating band is always on

So, when you have A701, it's necessary also to keep in note the information above.

A751
The temperature in the chamber is under the minimum value for the selected cycle.
*You could have this alarm during **T6**.*

The unit shows this alarm code
during the sterilization phase when the temperature read by **TEMP1** or **TEMP2**
goes under **121°C** for the cycle 121 or goes over **134°C** for the cycle 134.

This case is like A651 (follow the step 2, 3, 4, 5 and 6)

A761
The pressure sensor doesn't work or there are problems with the connections

1. check the connections between **PRESSURE1** and **CBL606**
2. replace **PRESSURE1**
3. replace **CBL606**

A801
The pressure in the chamber doesn't fall correctly
after the preheating phases or after the sterilization phase.
You could have this alarm when the unit discharges the pressure in the chamber.

1. check and clean **EV2** and **EV7**:
   it's possible that some impurity has gone into the hydraulic circuit
   so one of the 2 solenoid valve above could be blocked
2. check the cable and the connection between **EV2**, **EV7** and **CBL606**
3. clean **FILTER1**
4. check and clean the filter in the chamber:
   it's possible that something blocks the flow of water / steam
   in the bottom hole / filter of the chamber
5. replace **CBL606**:
   it's possible that the electronic doesn't send the command to open the 2 valve above

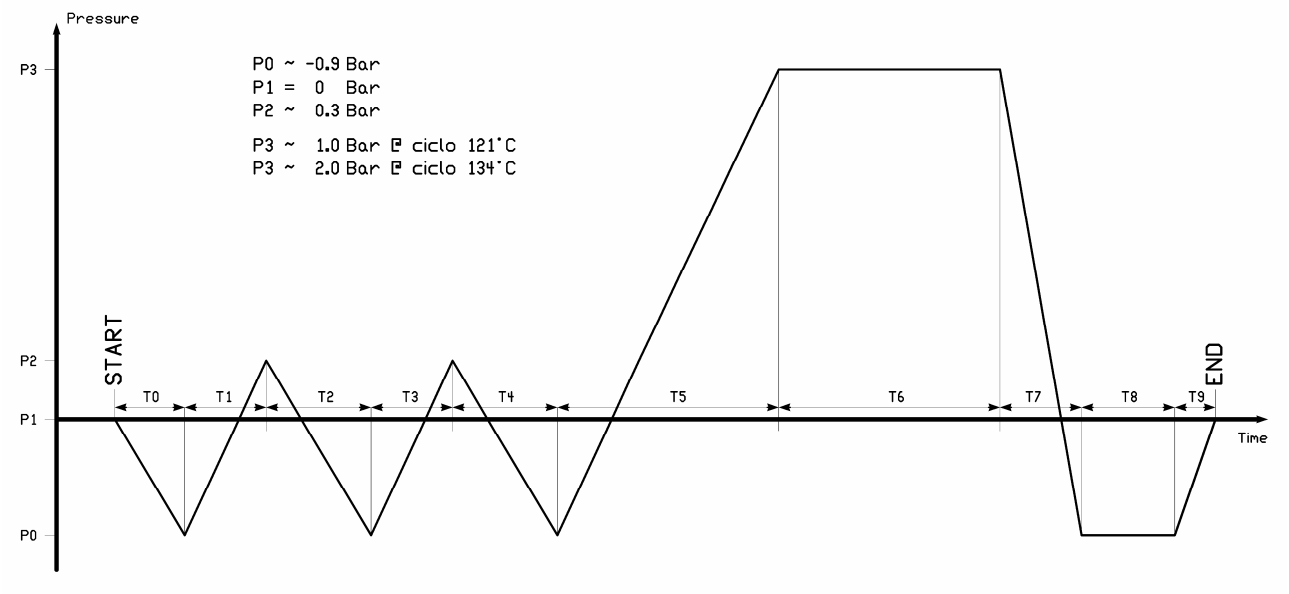
ATTENTION
If the unit isn't running a cycle and the pressure is increasing (for example because there is a lot of steam in the chamber and the unit is hot) then, over a certain level of pressure, the electronic board open the valve EV2 and EV7 to discharge the pressure. If the pressure doesn't fall then the unit will show A801.

A901
Power has been removed from the unit during a cycle.

It's possible that you have a problem on the power line or
someone has disconnected the power cable or switched-off the unit during a cycle.

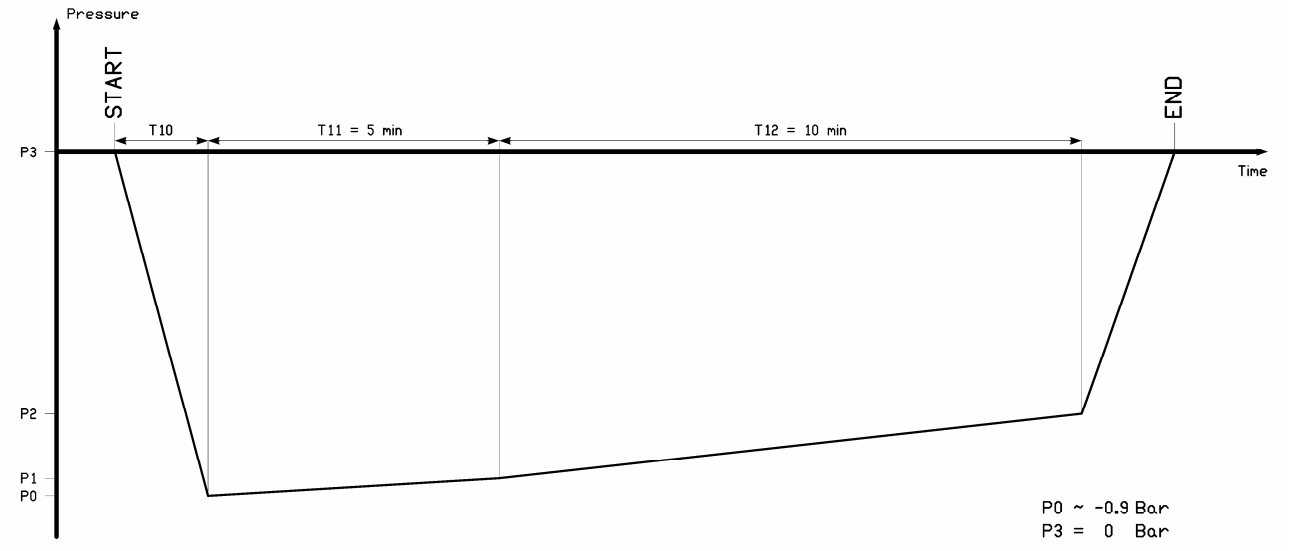
1. reset the alarm and restart the cycle
2. check the status of the cables and the connections
3. check the status of the main green button

CYCLE DIAGRAMS



PLOT 1

Pressure diagram when we push the key B-START for a cycle of 121°C or 134°C

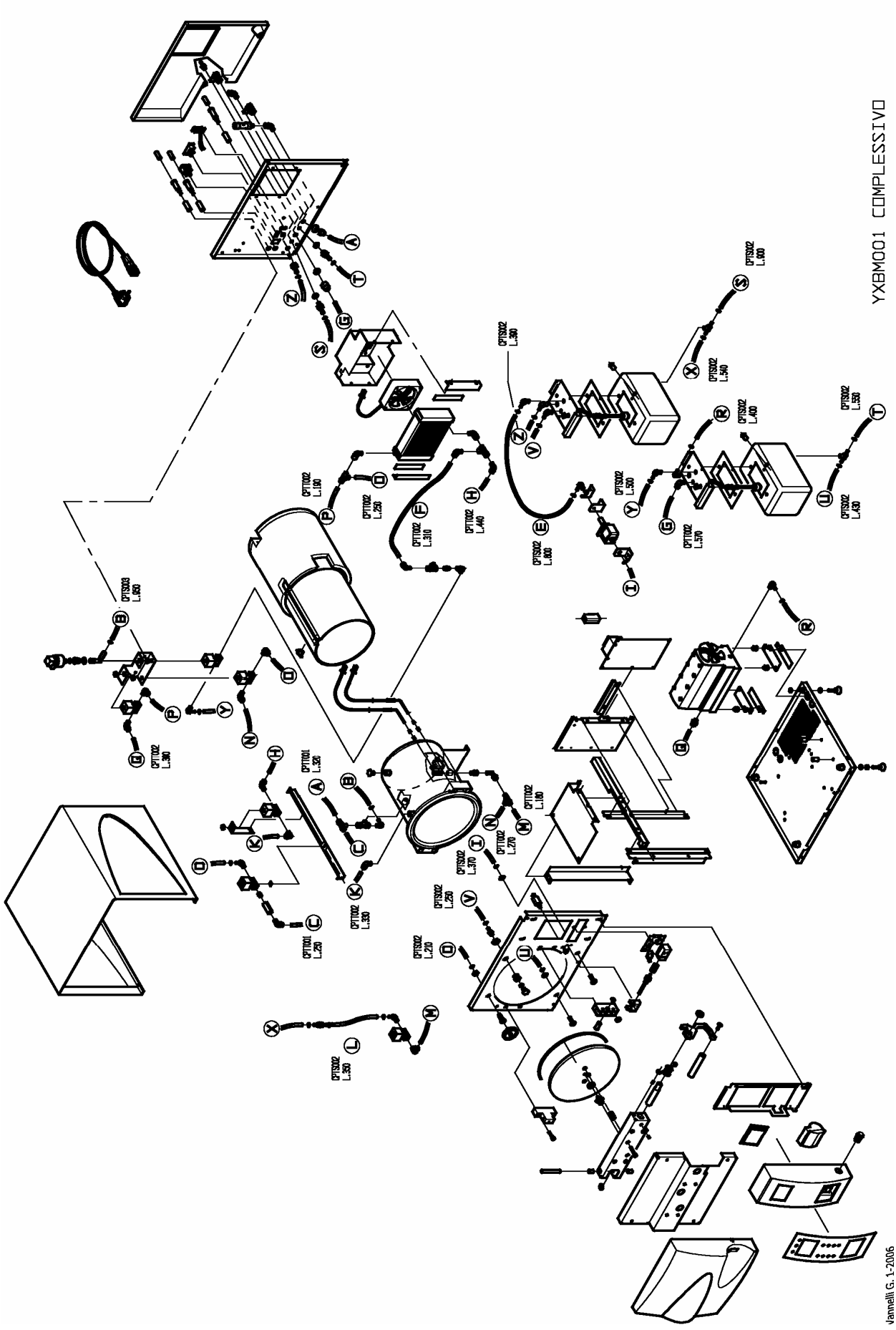


PLOT 2

Pressure diagram when we push the key B-START for a **vacuum test**

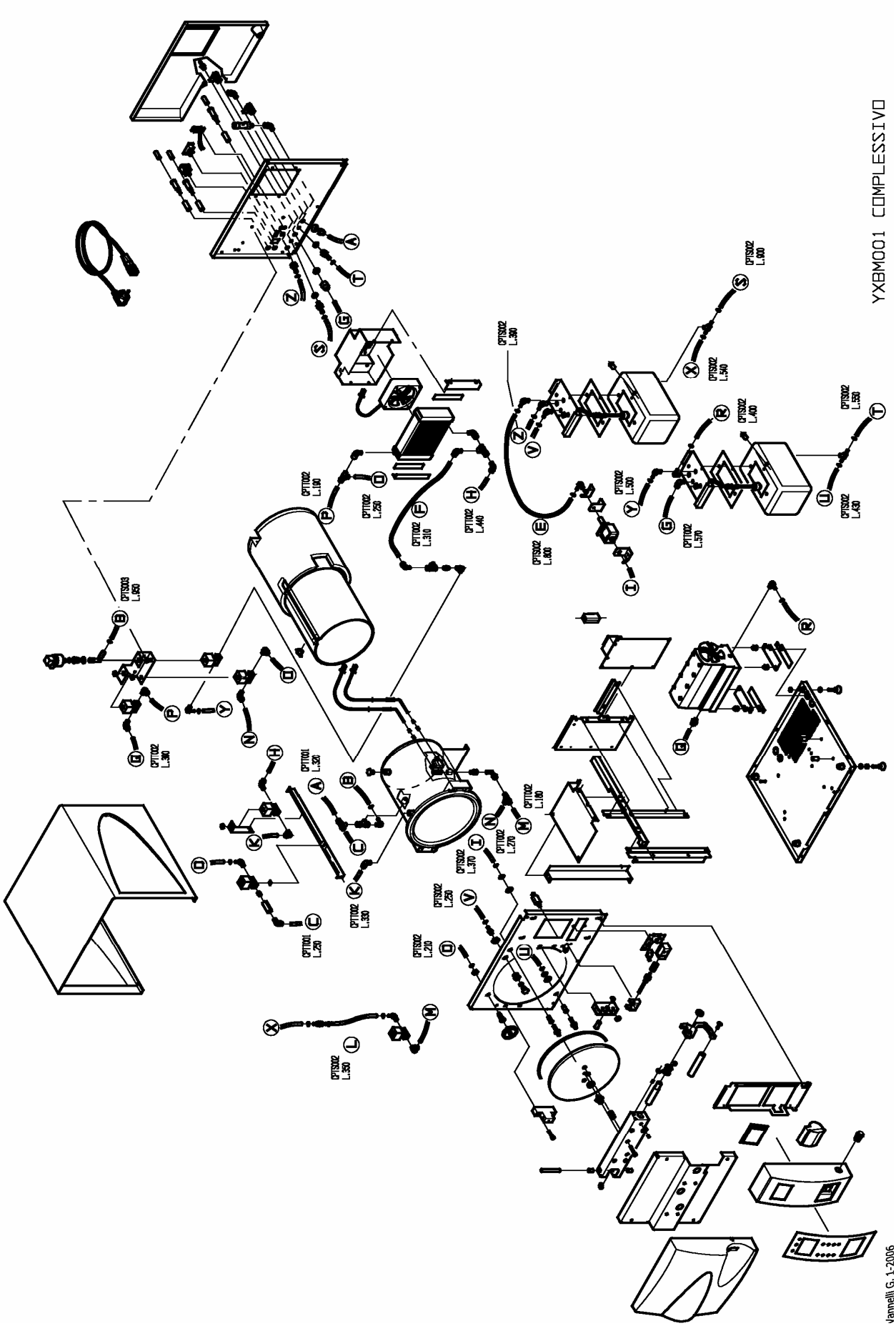
DISEGNO ESPLOSO / EXPLODED DRAWING

EUROPA B XP



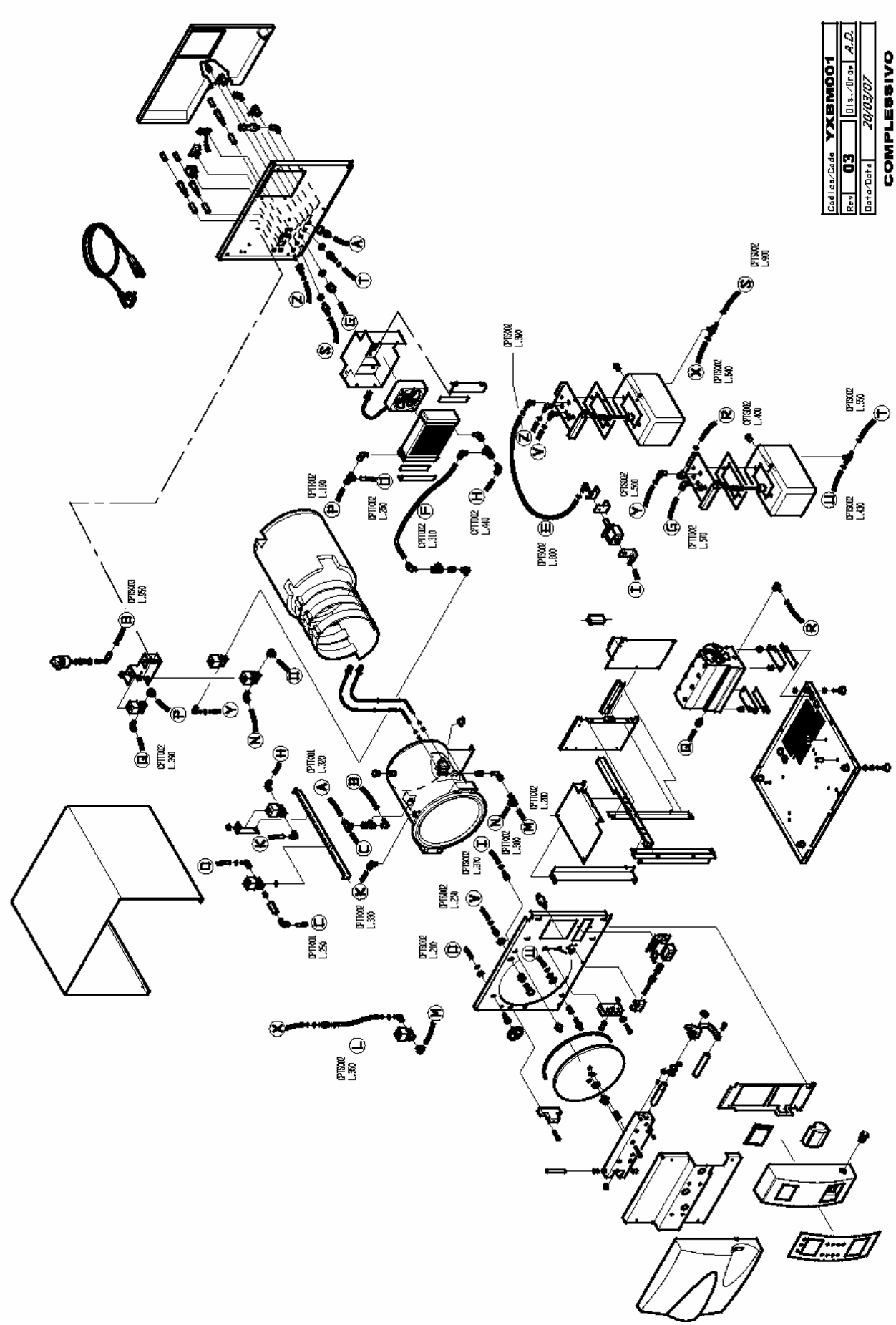
Rev_0

DISEGNO ESPLOSO – COMPLESSIVO / EXPLODED DRAWING – GLOBAL VIEW



Rev_1

DISEGNO ESPLOSO – COMPLESSIVO / EXPLODED DRAWING – GLOBAL VIEW



Rev_3

DISEGNO ESPLOSO – COMPLESSIVO / EXPLODED DRAWING – GLOBAL VIEW

Rev_1
15/06/2005

Sostituiti raccordi per carico e scarico acqua
Cambia anche il pannello frontale in quanto cambiano i fori di fissaggio

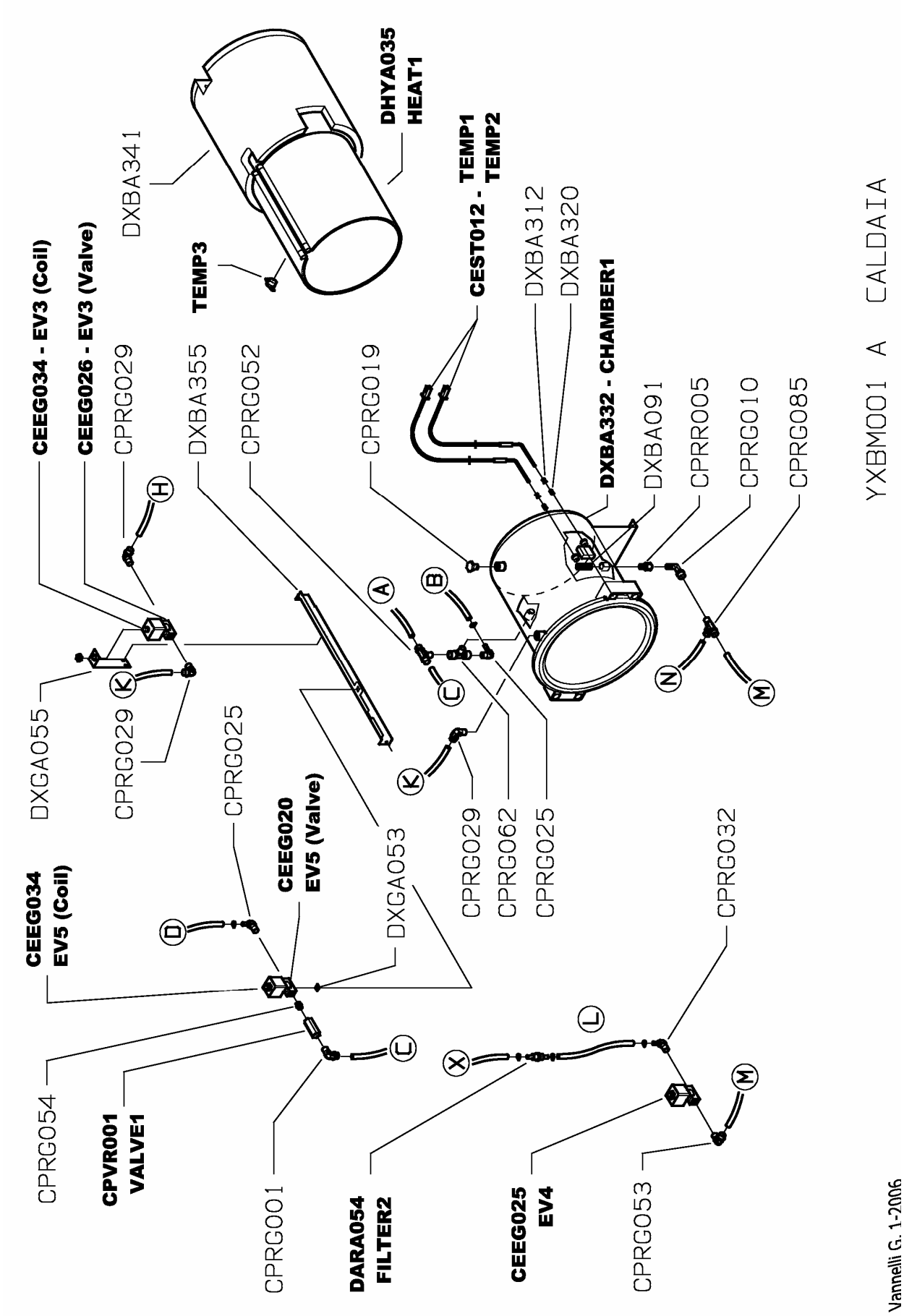
Replaced link for charge and discharge water
Replaced also the front panel because it's changed the position of the hole for the link above

Rev_3
20/03/2007

Sostituito raccordo per carico acqua
Eliminato:
n°1 DANA111
n°1 CM20011
n°1 CM05028

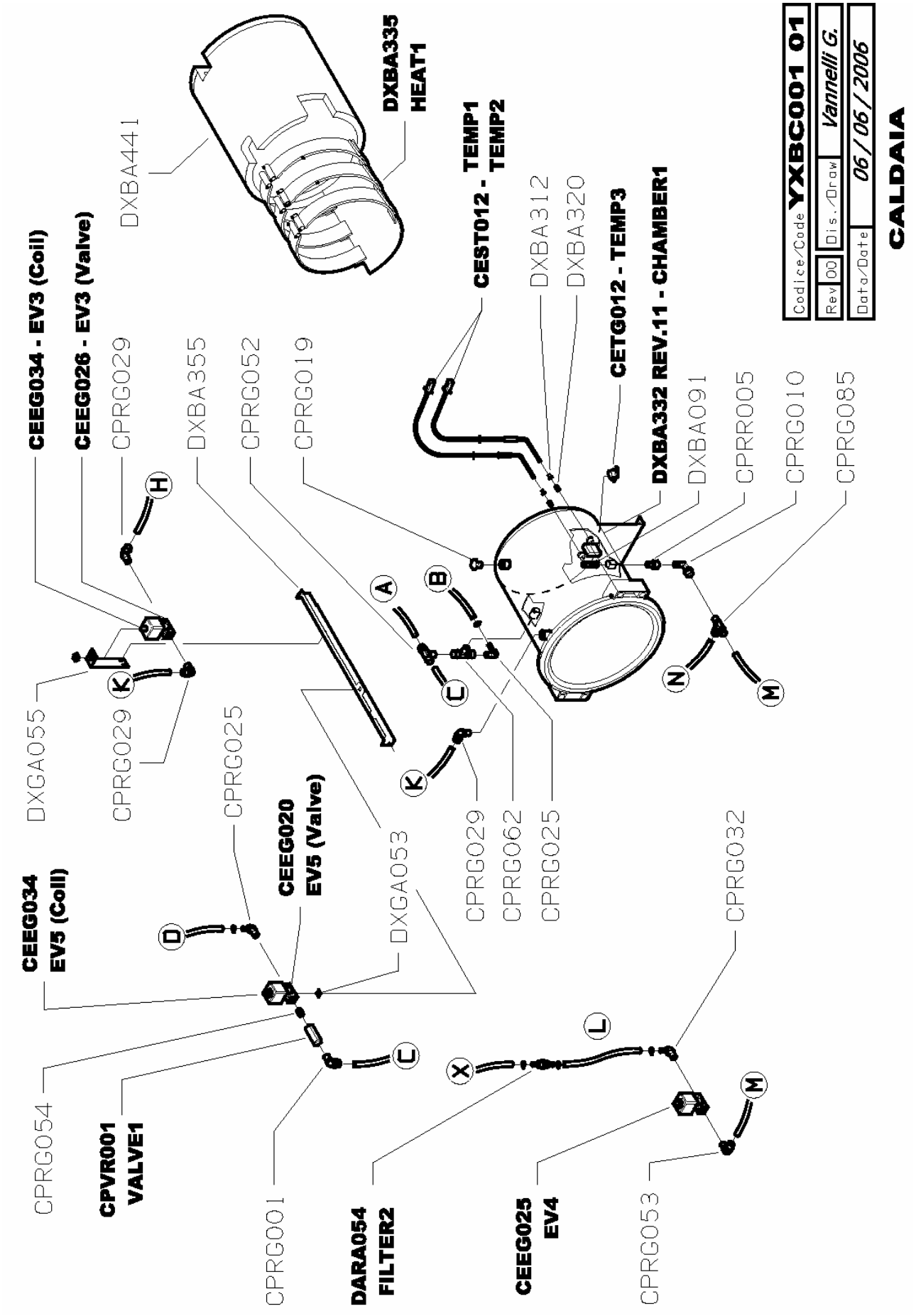
Replaced link for water charging.
Deleted:
n°1 DANA111
n°1 CM20011
n°1 CM05028

DISEGNO ESPLOSO – COMPLESSIVO / EXPLODED DRAWING – GLOBAL VIEW



Rev_0

DISEGNO ESPLOSO – PARTE 1 / EXPLODED DRAWING – PART 1



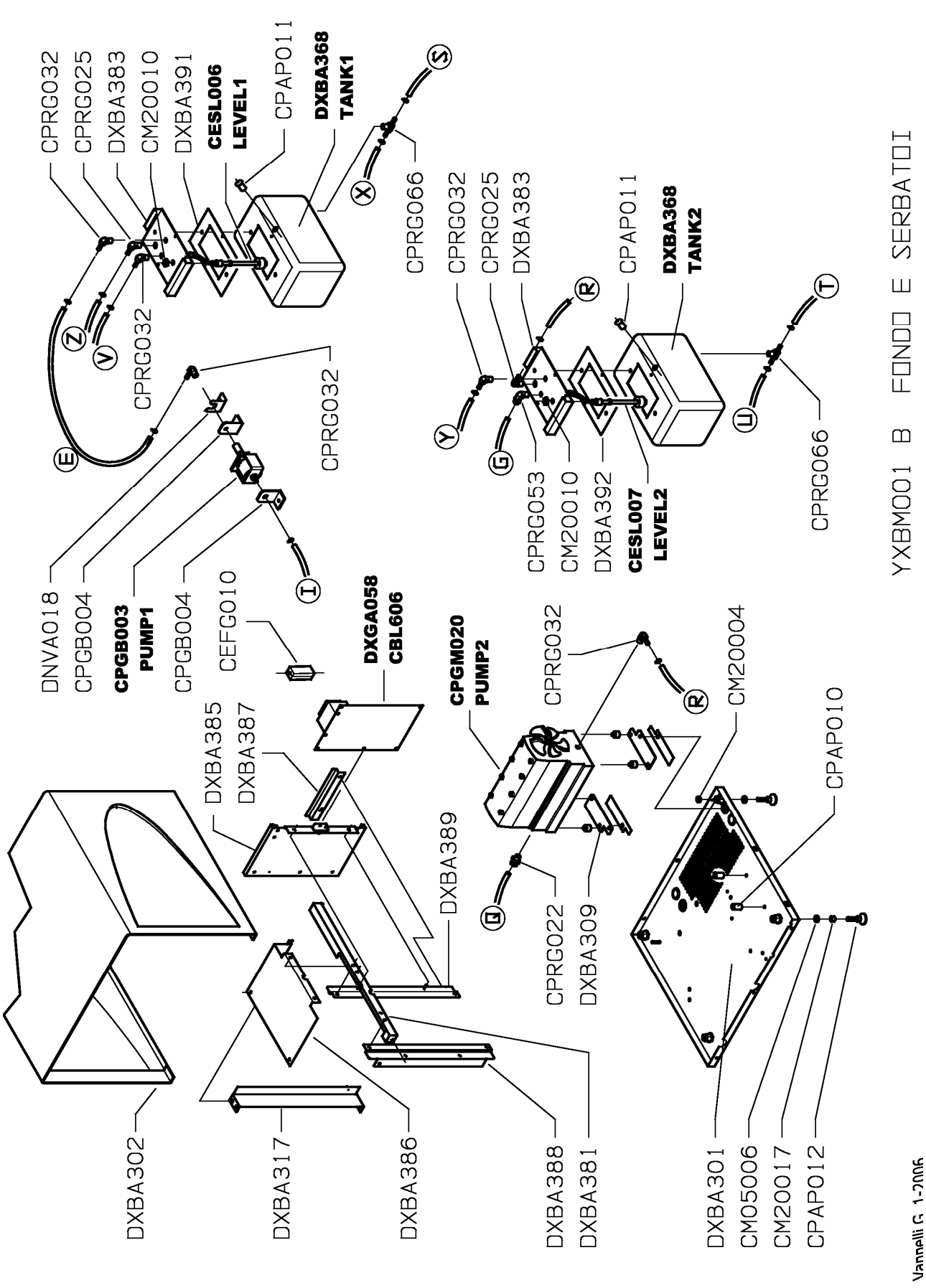
Rev_1

DISEGNO ESPLOSO – PARTE 1 / EXPLODED DRAWING – PART 1

Rev_1
06/06/06

Sostituiti DHYA035, DXBA332 Rev_10 con DXBA335+CEST012 (TEMP3) e DXBA332 Rev_11

Replaced DHYA035 , DXBA332 Rev_10 with DXBA335+CEST012 and DXBA332 Rev_11

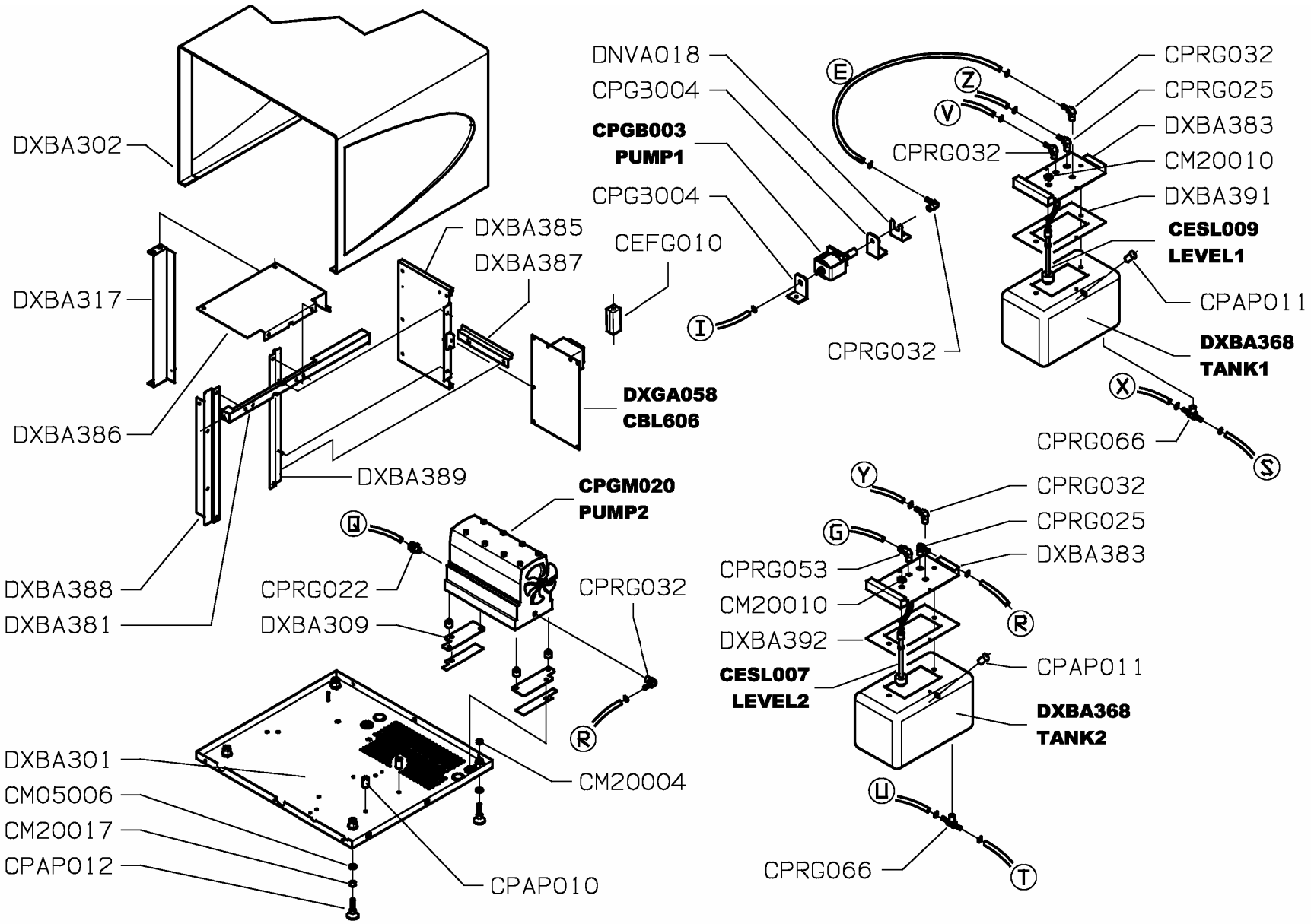


Rev_0

DISEGNO ESPLOSO – PARTE 2 / EXPLODED DRAWING – PART 2

DISEGNO ESPLOSO – PARTE 2 / EXPLODED DRAWING – PART 2

Rev_1



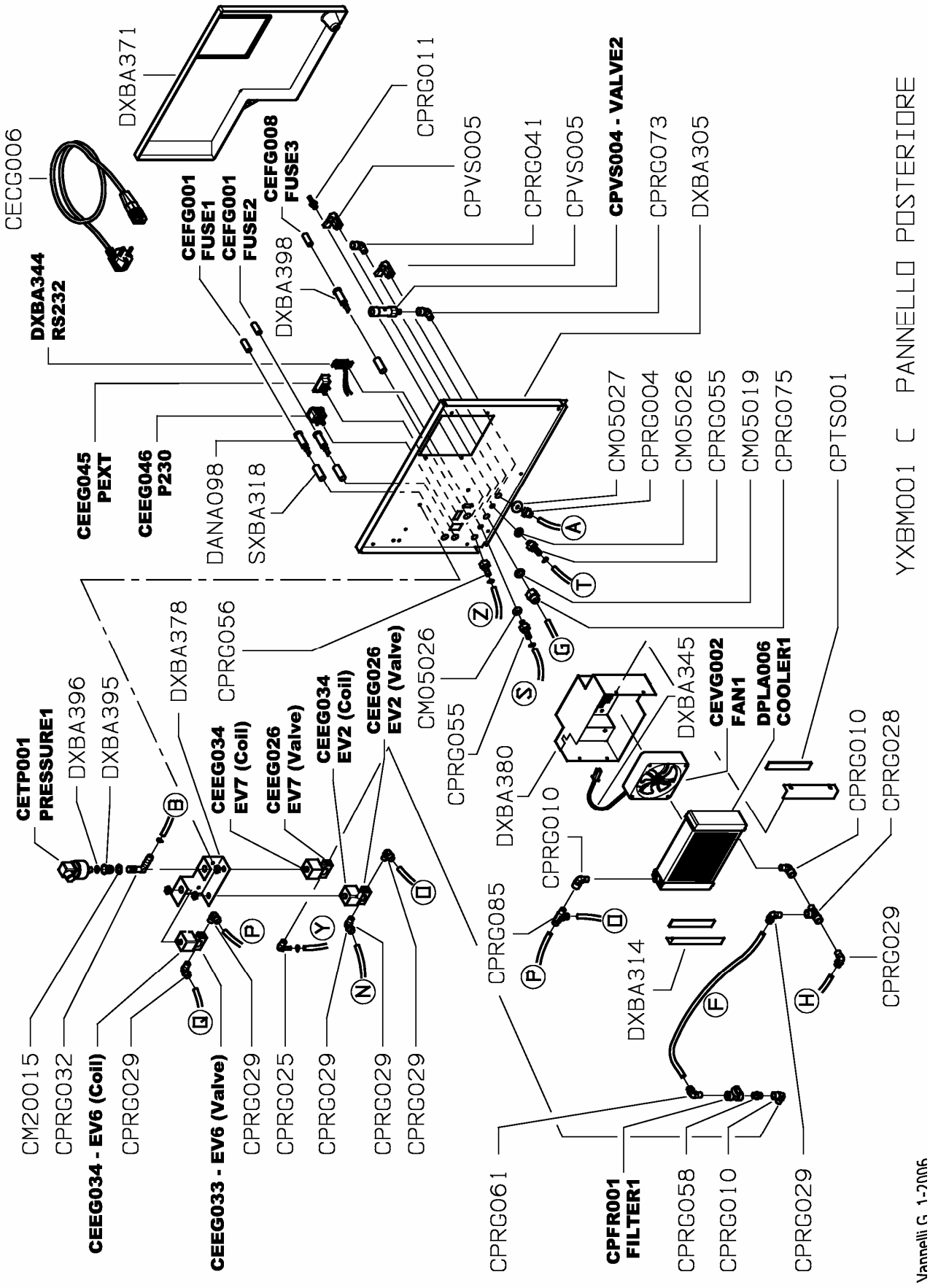
YXBM001 B FONDO E SERBATOI

Vannelli G. 1-2006

Rev_1
25/07/2005

Sostituite sonde CESL006 con CESL009

Replaced level probe CESL006 with CESL009



Rev_0

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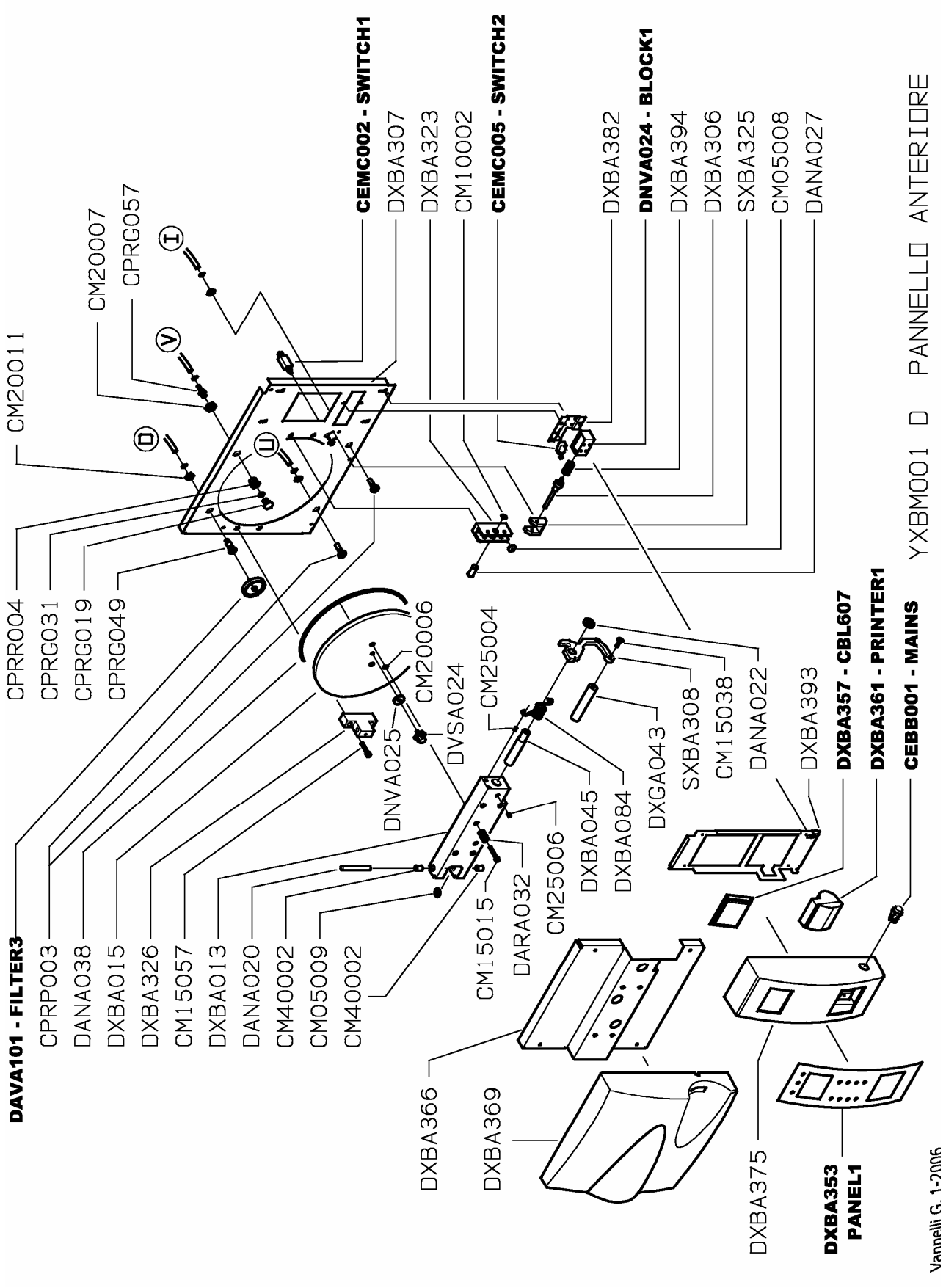

Rev_0

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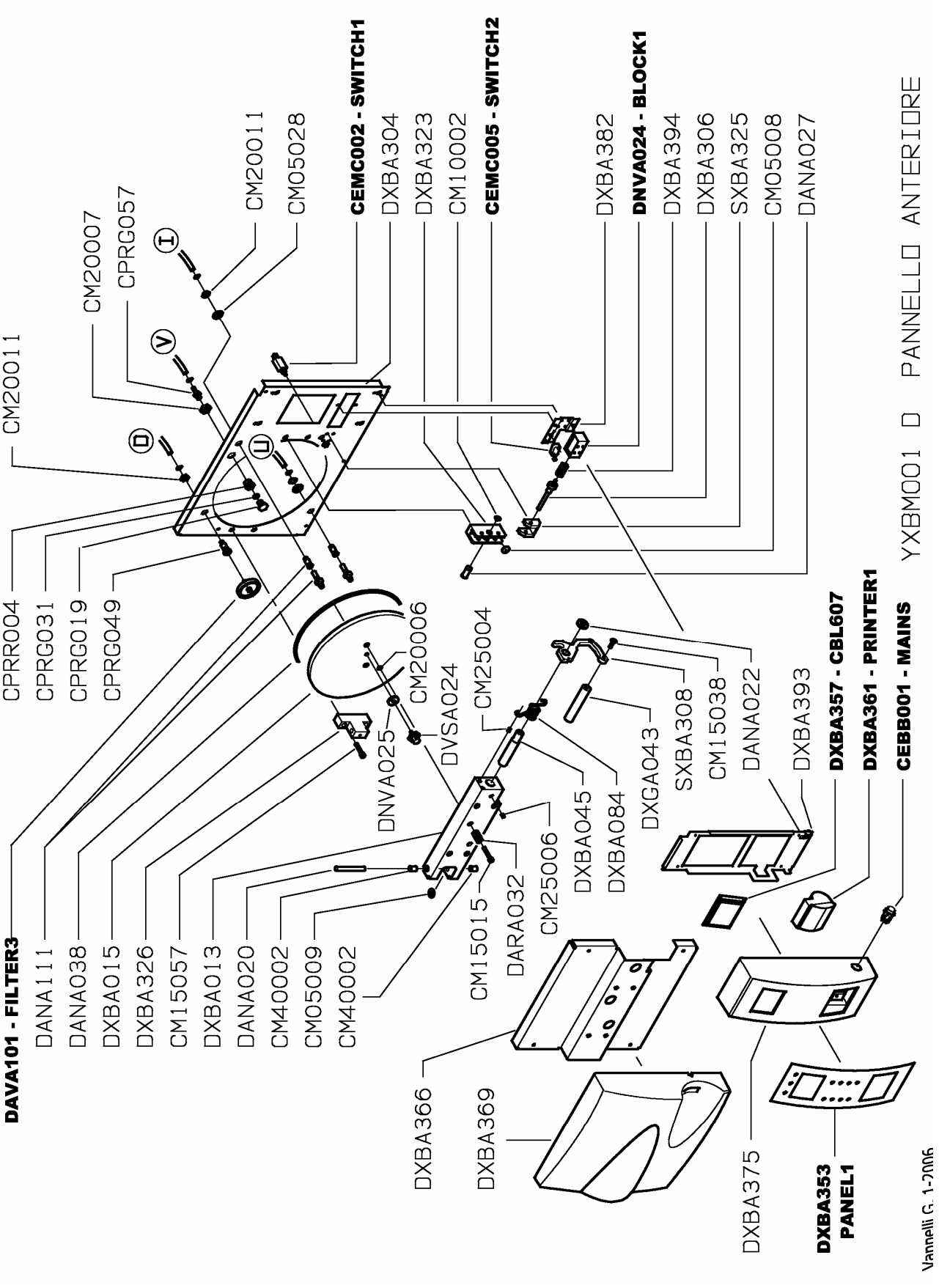

Rev_1

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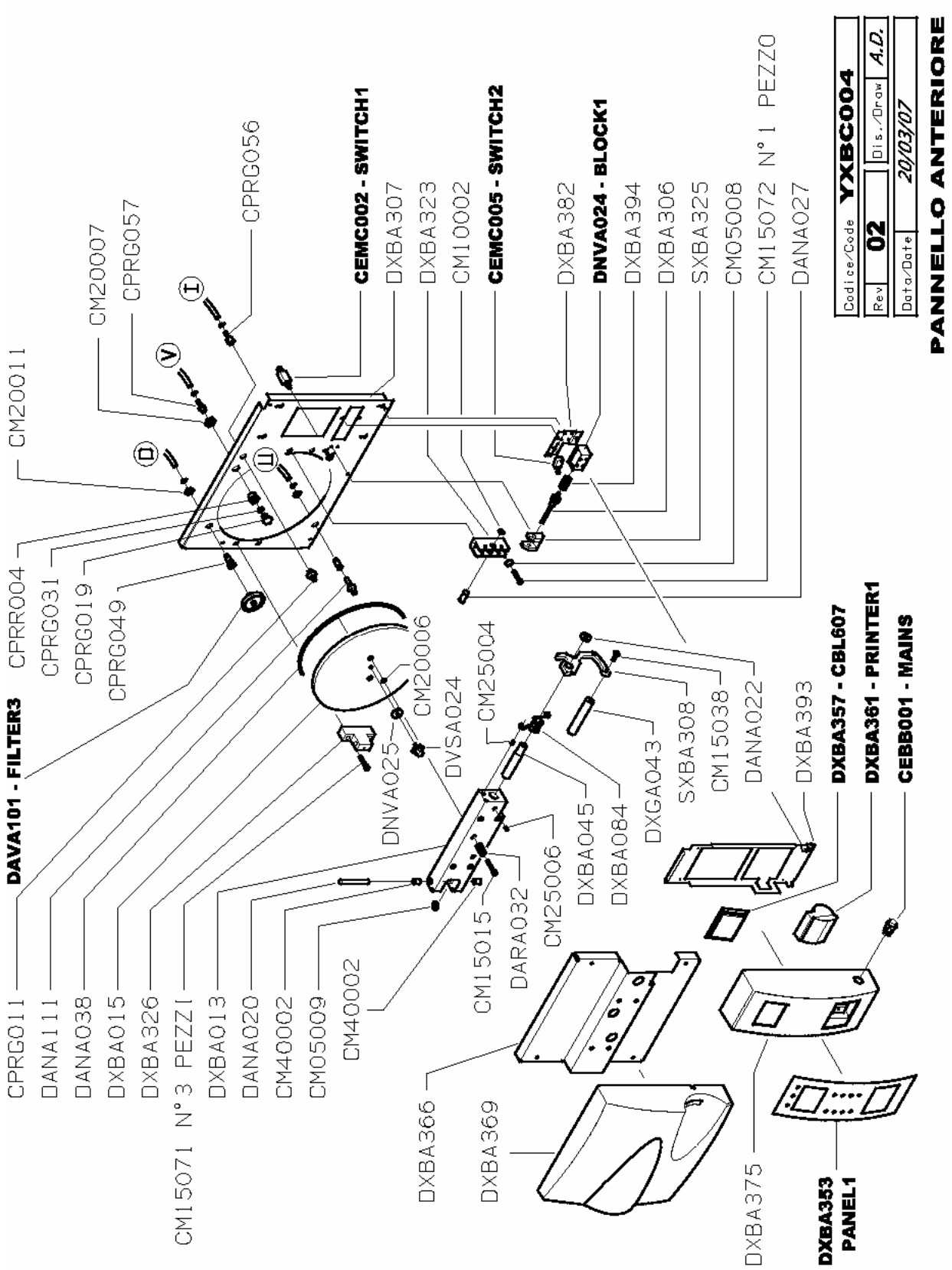


Rev_2

DISEGNO ESPLOSO – PARTE 4 / EXPLODED DRAWING – PART 4

Rev_1
15/06/2005

Sostituiti raccordi in plastica CPRP003 con i raccordi in metallo DANA111
Sostituito pannello frontale DXBA307 con il DXBA304

Replaced plastic link CPRP003 with metallic connection DANA111
Replaced front panel DXBA307 with DXBA304

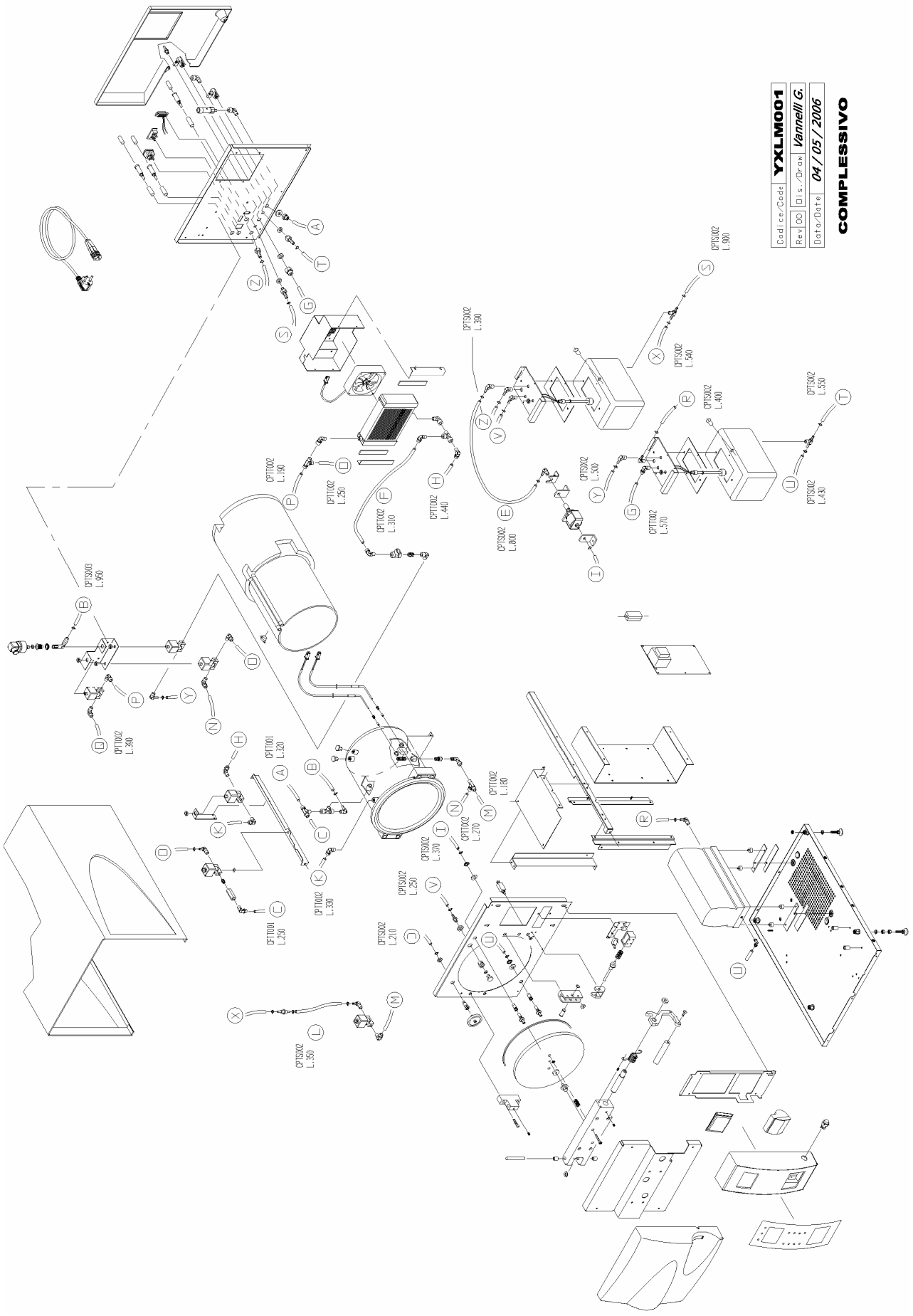
Rev_2
20/03/2007

Sostituito raccordo per carico acqua
Eliminato:
n°1 DANA111
n°1 CM20011
n°1 CM05028

Replaced link for water charging.
Deleted:
n°1 DANA111
n°1 CM20011
n°1 CM05028

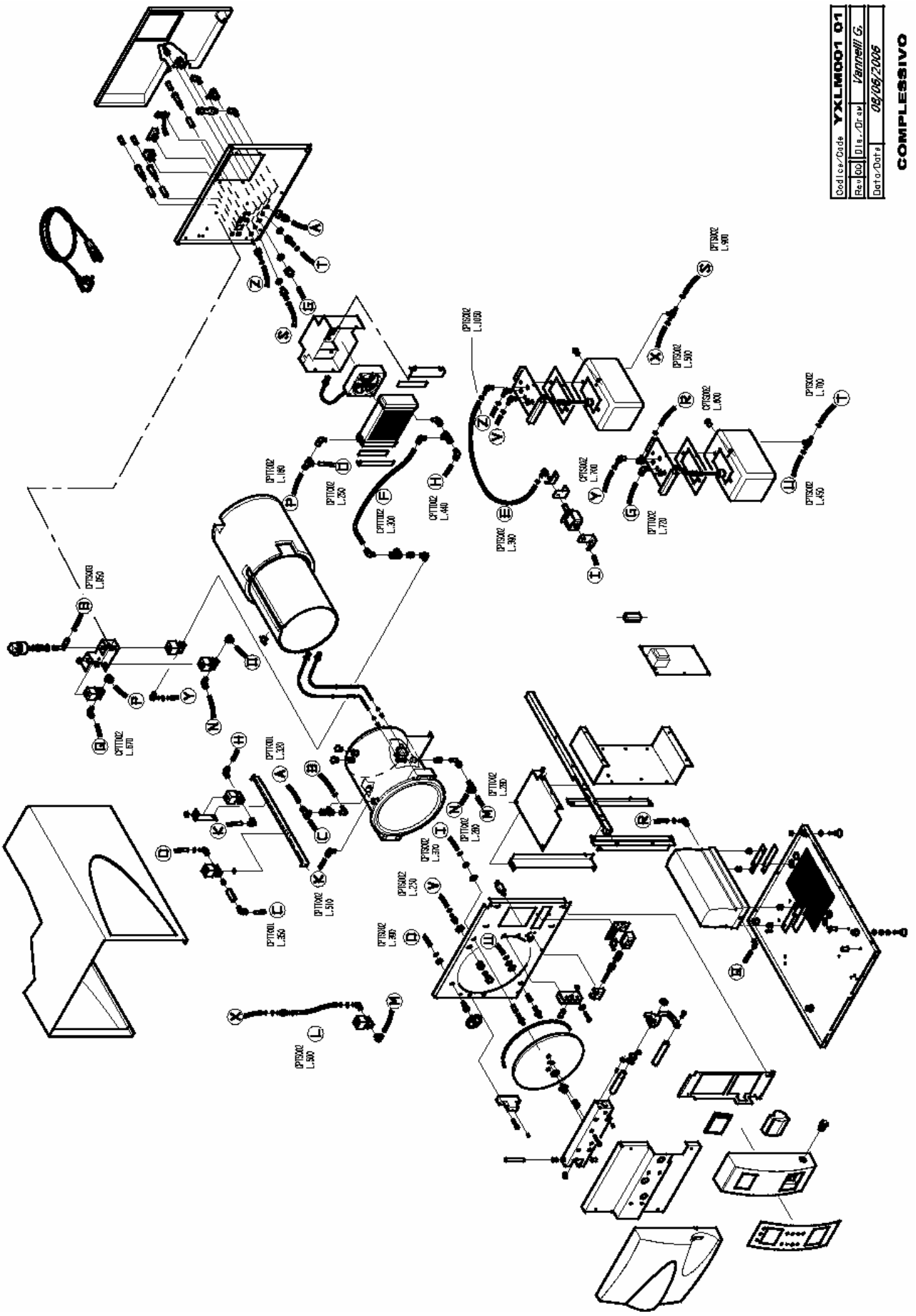
DISEGNO ESPLOSO / EXPLODED DRAWING

EUROPA B XP 24L



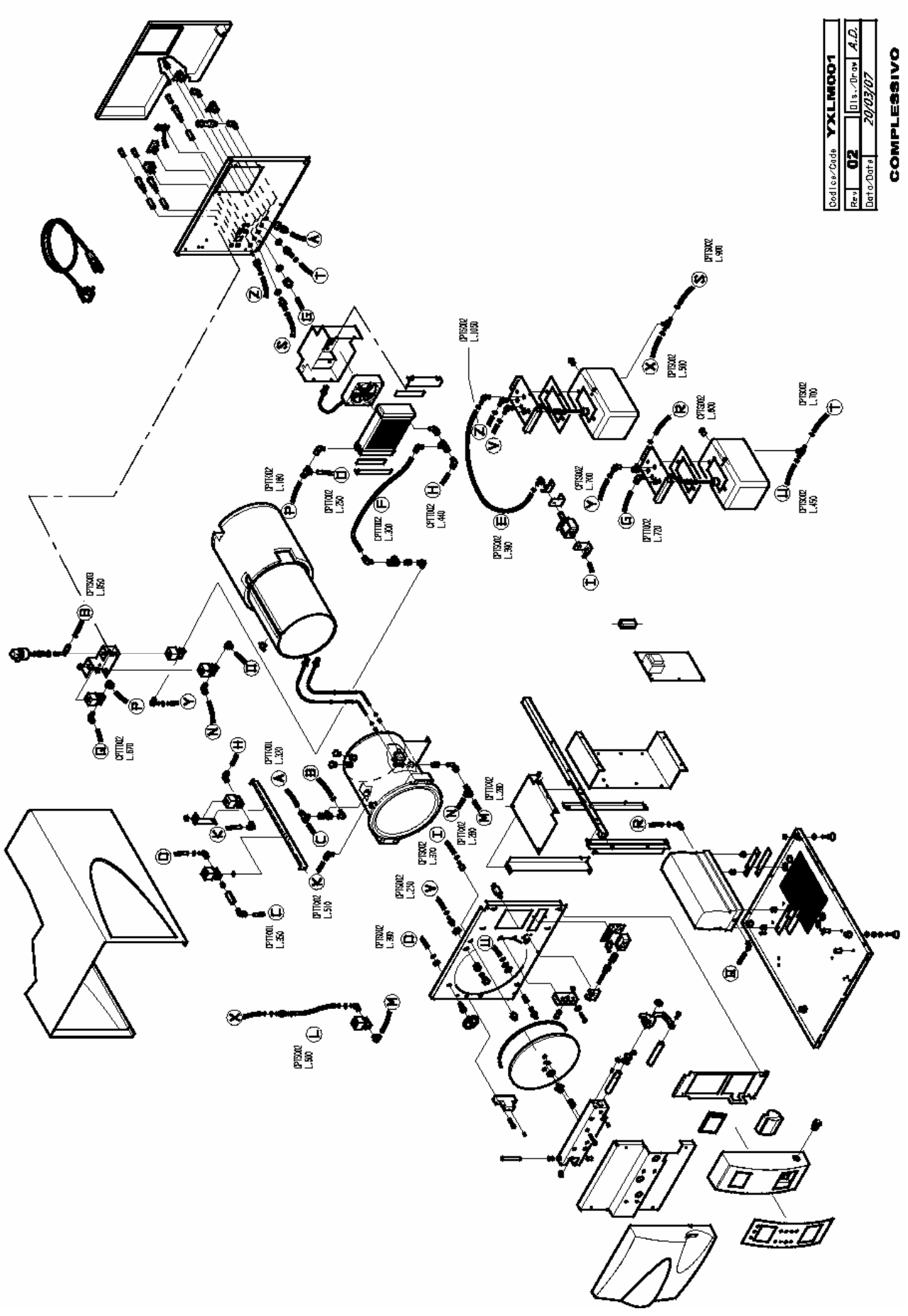
Rev_0

DISEGNO ESPLOSO – COMPLESSIVO / EXPLODED DRAWING – GLOBAL VIEW



Rev_1

DISEGNO ESPLOSO – COMPLESSIVO / EXPLODED DRAWING – GLOBAL VIEW



Rev_2

DISEGNO ESPLOSO – COMPLESSIVO / EXPLODED DRAWING – GLOBAL VIEW

Rev_1
08/06/06

Cambiate viti di fissaggio DXBA326 e DXBA323

Changed screw to fix the DXBA326 and the DXBA323

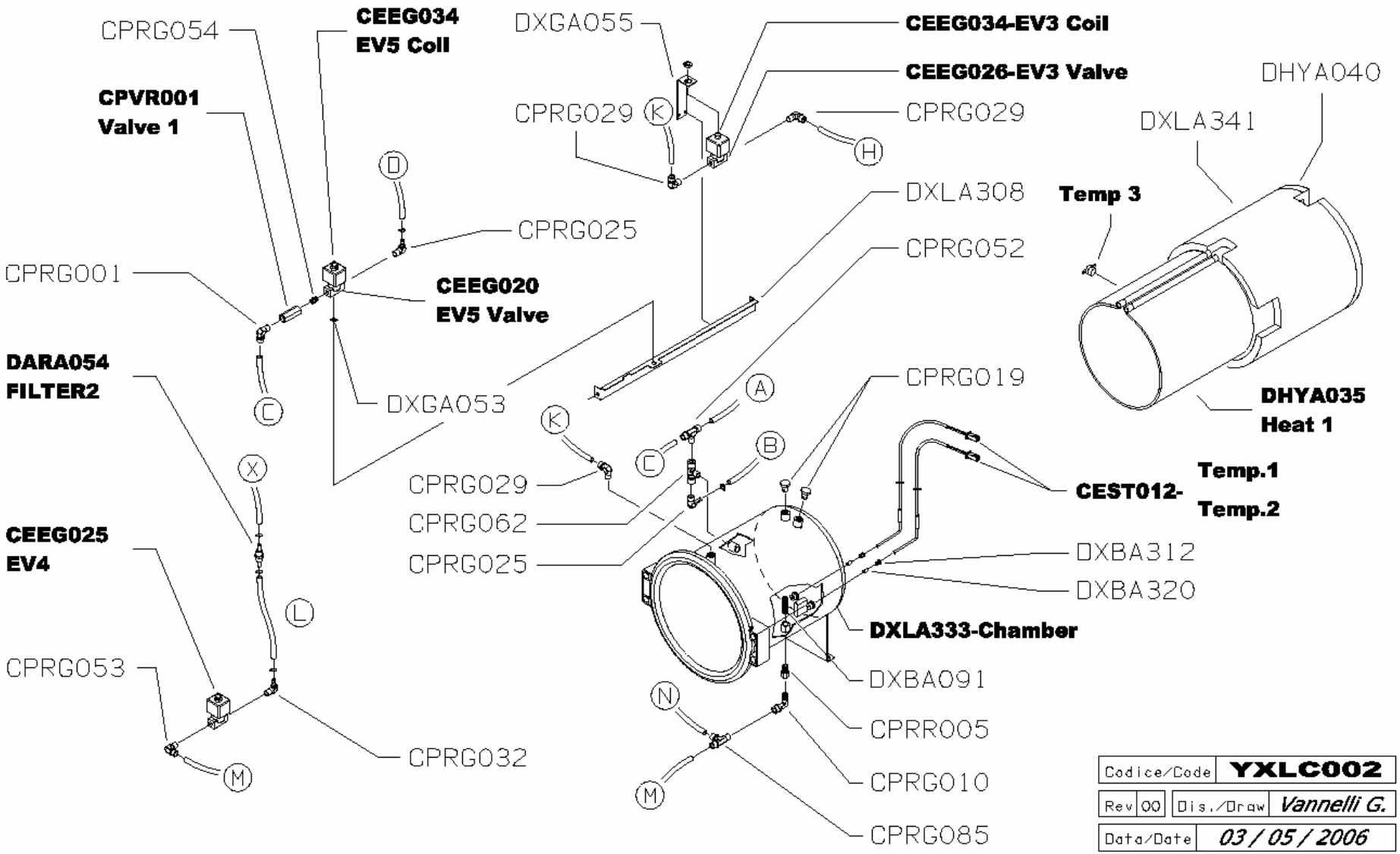
Rev_2
20/03/2007

Sostituito raccordo per carico acqua
Eliminato:
n°1 DANA111
n°1 CM20011
n°1 CM05028

Replaced link for water charging.
Deleted:
n°1 DANA111
n°1 CM20011
n°1 CM05028

DISEGNO ESPLOSO – PARTE 1 / EXPLODED DRAWING – PART 1

Rev_0



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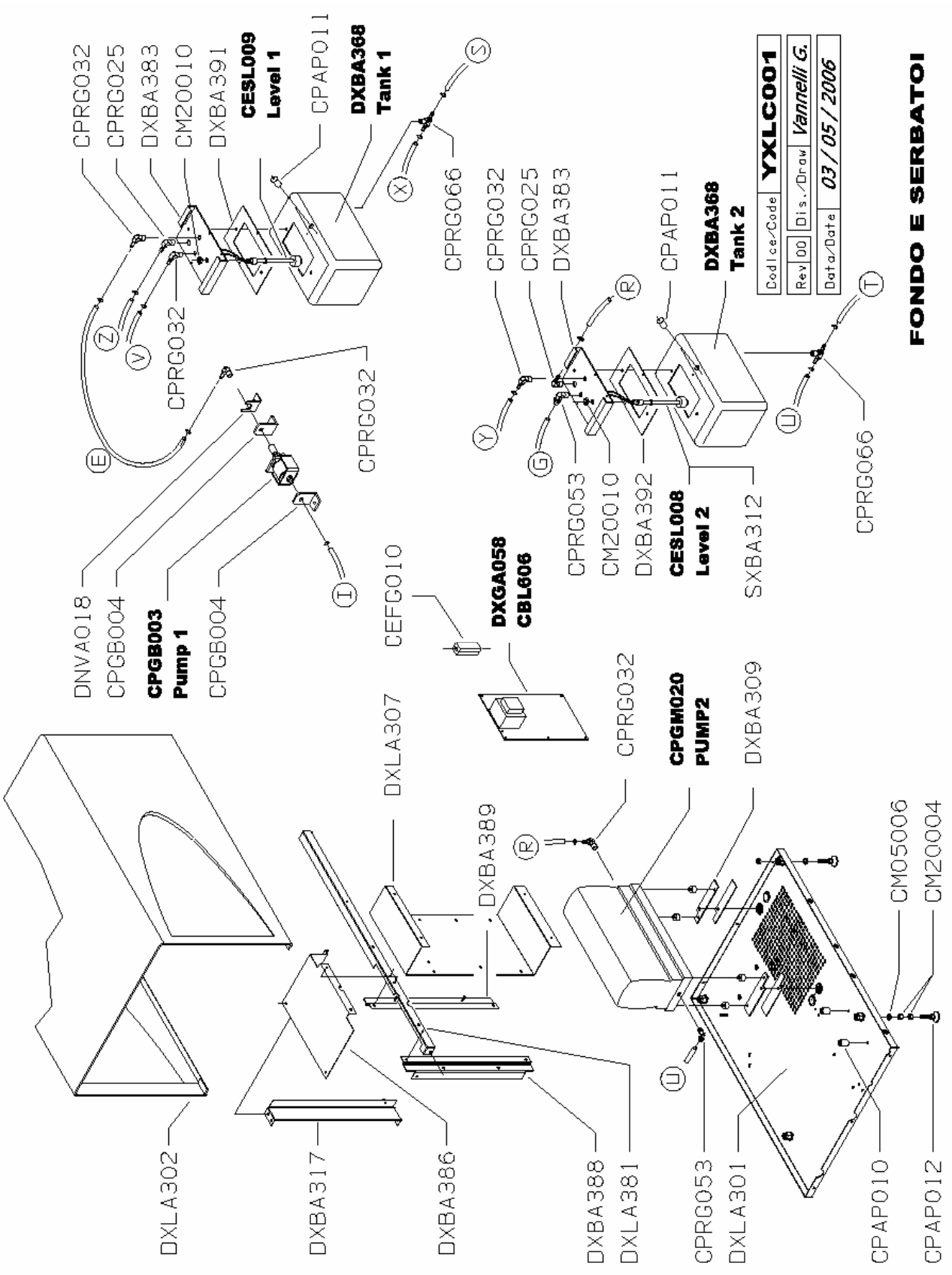
Rev 00	Dis./Draw Vannelli G.
Data/Date	03 / 05 / 2006

CALDAIA


FONDO E SERBATOI
Codice/Code YXLC001
Rev 00
Dis./Draw Vannelli G.
Data/Date 03/05/2006
CPRG032
CPRG025
DXBA383
CM20010
DXBA391
CESL009
Level 1
CPAP011
DXBA368
Tank 1
CPRG066
DNVA018
CPGB004
CPGB003
Pump 1
CPGB004
CEFG010
DXGA058
CBL606
DXLA307
DXBA389
CPRG032
CPGM020
PUMP2
DXBA309
CM05006
CM20004
DXLA302
DXBA317
DXBA386
DXBA388
DXLA381
CPRG053
DXLA301
CPAP010
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Level 2
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Tank 2
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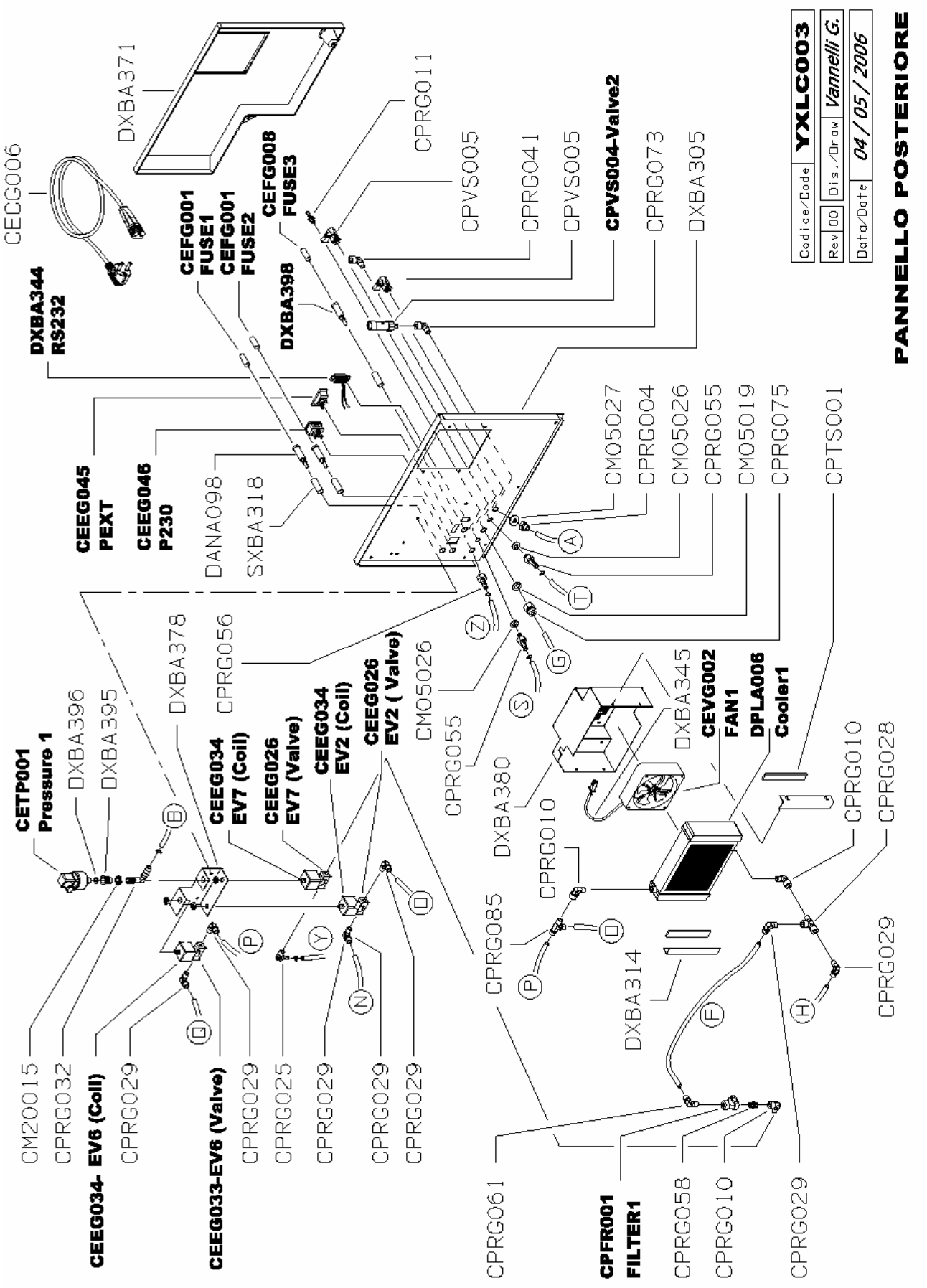
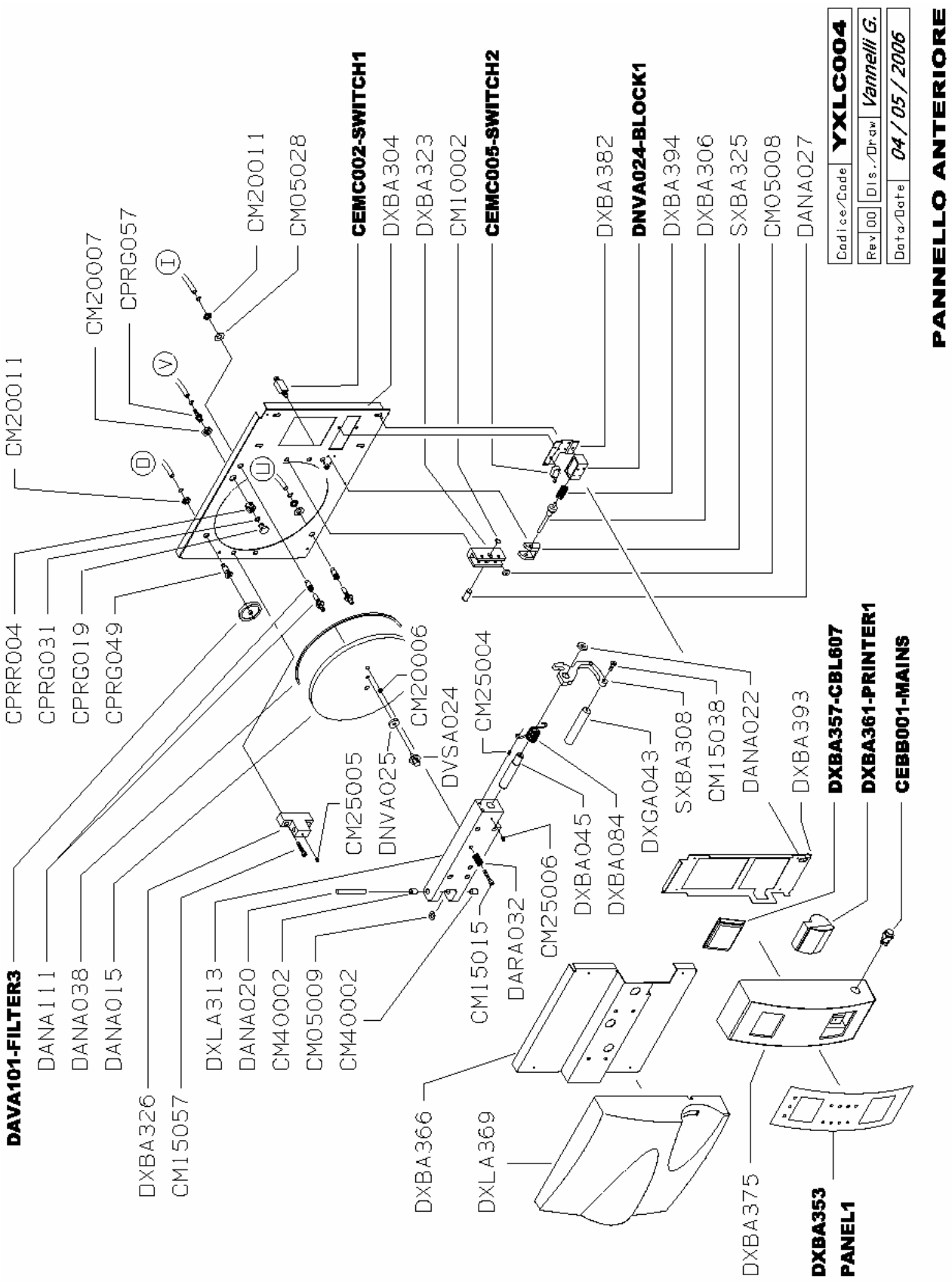
Rev_0



Rev_0

DISEGNO ESPLOSO – PARTE 3 / EXPLODED DRAWING – PART 3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Codice/Code YXLC004
Rev 00
Dis./Draw Vannelli G.
Data/Date 04/05/2006
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CM20007
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CM05028
CEMC002-SWITCH1
DXBA304
DXBA323
CM10002
CEMC005-SWITCH2
DXBA382
DNVA024-BLOCK1
DXBA394
DXBA306
SXBA325
CM05008
DANA027
CPRR004
CPRG031
CPRG019
CPRG049
DAVA101-FILTER3
DANA111
DANA038
DANA015
DXBA326
CM15057
DXLA313
DANA020
CM40002
CM05009
CM40002
CM25005
DNVA025
CM20006
DVSA024
CM25004
CM15015
DARA032
CM25006
DXBA045
DXBA084
DXGA043
SXBA308
CM15038
DANA022
DXBA393
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DXBA361-PRINTER1
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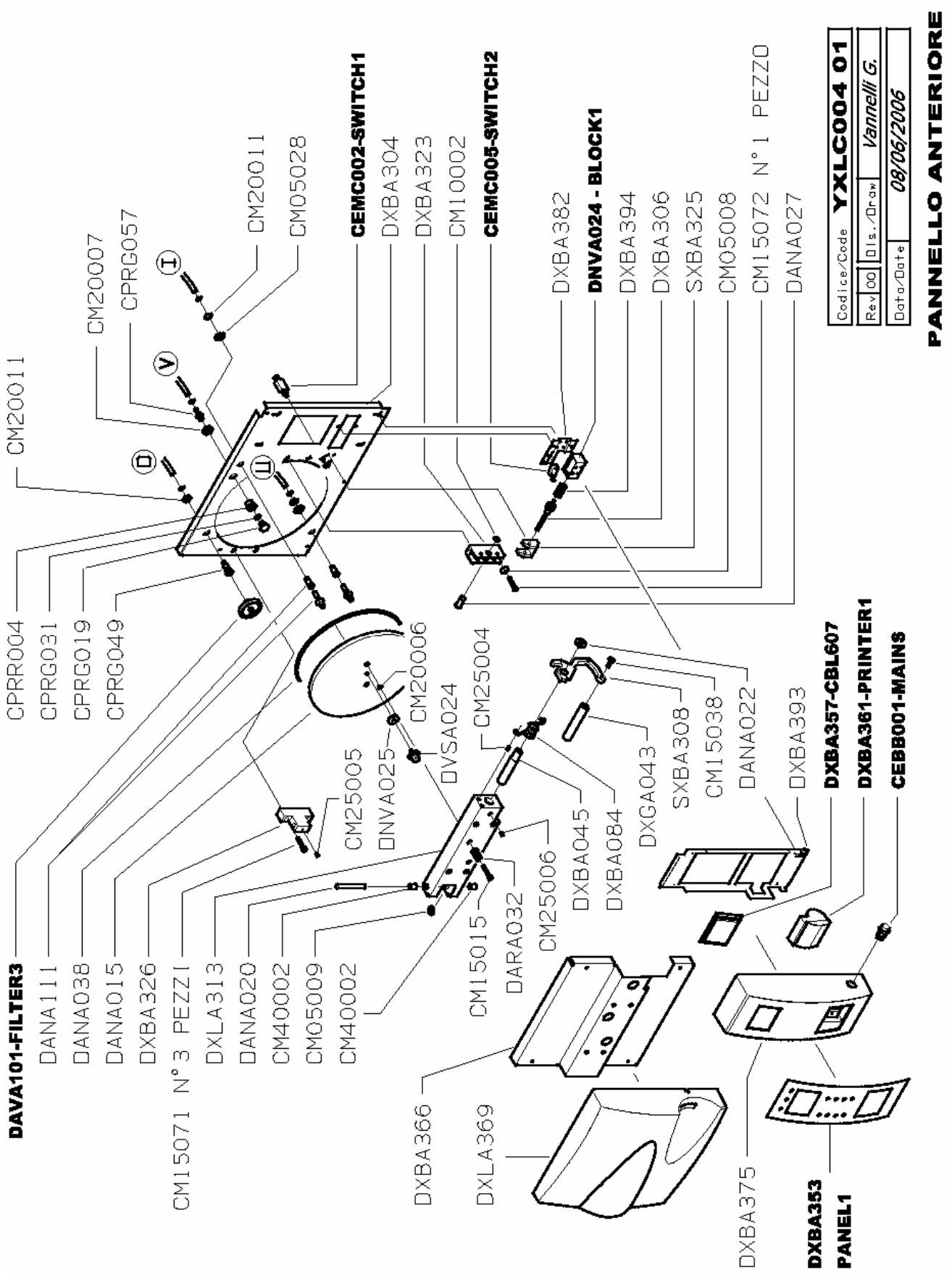
DXBA366
DXLA369
DXBA375
DXBA353
PANEL1

Rev_0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Codice/Code YXLC004 01
Rev 00 Dis./Draw Vannelli G.
Data/Date 08/06/2006
DAVA101-FILTER3
DANA111
DANA038
DANA015
DXBA326
CM15071 N°3 PEZZI
DXLA313
DANA020
CM40002
CM05009
CM40002
CPRR004
CPRG031
CPRG019
CPRG049
CM20011
CM20007
CPRG057
CM20011
CM05028
CEMC002-SWITCH1
DXBA304
DXBA323
CM10002
CEMC005-SWITCH2
DXBA382
DNVA024 - BLOCK1
DXBA394
DXBA306
SXBA325
CM05008
CM15072 N°1 PEZZO
DANA027
CM25005
DNVA025
CM20006
DVSA024
CM25004
CM15015
DARA032
CM25006
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DXGA043
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CM15038
DANA022
DXBA393
DXBA357-CBL607
DXBA361-PRINTER1
CEBB001-MAINS
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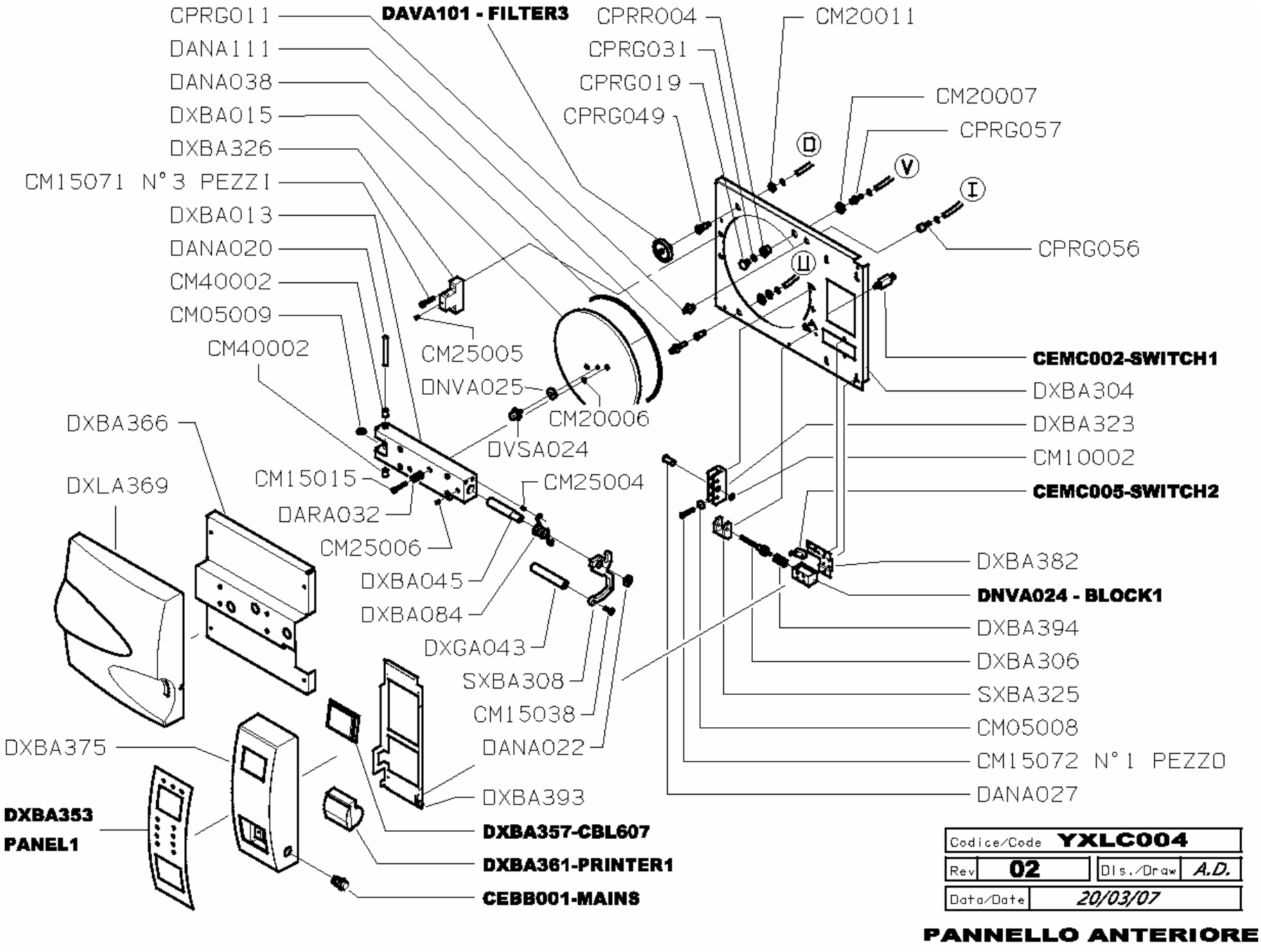
PANEL1

Rev_1

DISEGNO ESPLOSO – PARTE 4 / EXPLODED DRAWING – PART 4

Rev_2



Codice/Code	YXLC004		
Rev	02	Dis./Draw	A.D.
Data/Date	20/03/07		

PANNELLO ANTERIORE

Rev_1
08/06/06

Cambiate viti di fissaggio DXBA326 e DXBA323

Changed screw to fix the DXBA326 and the DXBA323

Rev_2
20/03/2007

Sostituito raccordo per carico acqua
Eliminato:
n°1 DANA111
n°1 CM20011
n°1 CM05028

Replaced link for water charging.
Deleted:
n°1 DANA111
n°1 CM20011
n°1 CM05028